



TELEPHONE
1852
NUMBER

THE CHEMIST AND DRUGGIST

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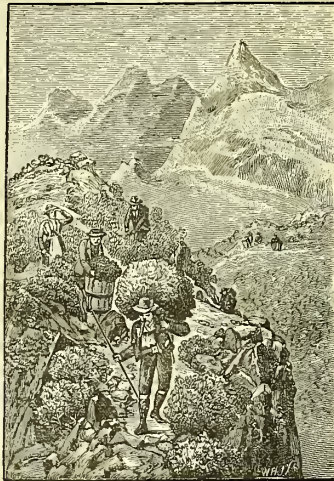
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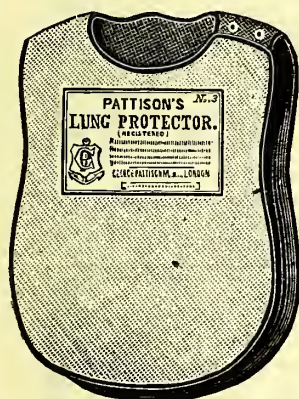
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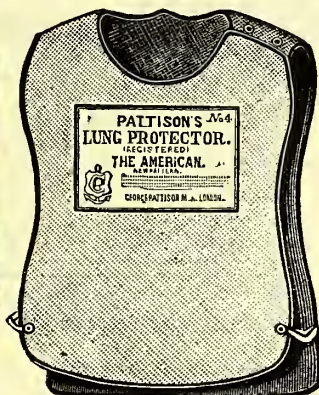
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The following are the principal contents of the August number:—

EDITORIAL NOTES.

The Pharmacy Board of New South Wales—The New Zealand Pharmacy Board Election—Poison Regulations—Chemists Accused of Manslaughter—The New Zealand Medical Bill—The Queensland Medical Bill—Friendly Societies' Dispensaries—Opium and the Chinese in Victoria—Price of the New Zealand Pharmaceutical Register Reduced—Intercolonial Courtesies—A Pharmacy Bill for South Australia.

COLONIAL REPORTS.

New South Wales.—Board of Pharmacy (official report of Monthly Meeting)—Pharmaceutical Society (official report of Monthly Council Meeting)—Presentations to Mr. Edwin Quayle, Director of the School of Pharmacy—Comments on Current Topics—Trade Items.

New Zealand.—Pharmacy Board (reports of two Meetings)—The Midland Pharmaceutical Association of New Zealand (report of Monthly Meeting)—Letters from Correspondents at Wellington, Christchurch, and Timaru.

Queensland.—Pharmacy Board (official report of Monthly Meeting)—Tariiff Interpretations.

South Australia.—Pharmaceutical Society (official reports of Monthly Council and General Meetings and of Special General Meeting re the proposed Pharmacy Bill)—Trade News and Comments on current Pharmaceutical affairs.

Tasmania.—Trade Notes from Hobart and Launceston.

Victoria.—Pharmacy Board (report of Monthly Meeting)—Pharmaceutical Society (report of Monthly Council Meeting)—Copy of Final Examination Paper—Trade News.

Charges of Manslaughter against Chemists (special reports).

Legal Reports.—Damaged Tartaric Acid (Levy v. Van Duijn).

Coal Tar.—A paper by C. H. Braddock, read before the Pharmaceutical Society of South Australia.

Photography.—(Article 3: How to take a Photograph.)

Correspondence—Student's Corner (report on Twenty-ninth Competition)—Births, Marriages, and Deaths—Trade Notes, &c., &c.

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Mr. A. L. W. Fechtner, Hull.	Mr. J. H. Weston, Holyhead.
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MR. J. W. BYGOTT.

MINOR.

MR. J. A. GELLING.
" E. WHEELDON.
" W. B. LORD.
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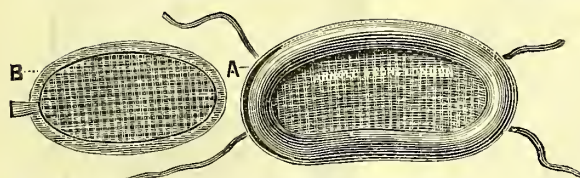
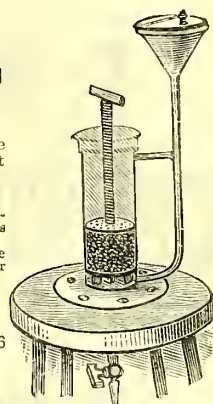
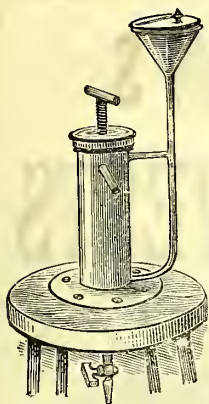
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Each supplied with an extra Diaphragm.

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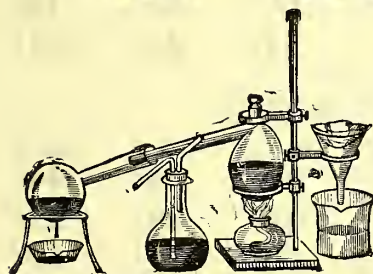
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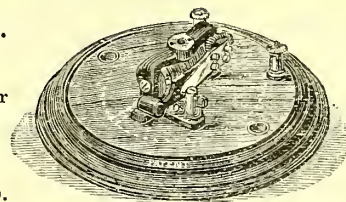
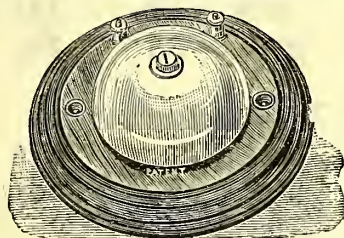
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CHEST PROTECTORS AND VESTS

For Shielding the Lungs.



FIG. 3.
Double, for the Chest and Back.

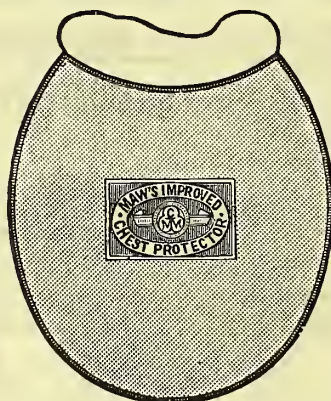


FIG. 4.
Single, Chest Protector.



FIG. 5.
Vest, a Shield for the Lungs.

CHAMOIS AND FLANNEL.

					No. 1	No. 2	No. 3	No. 4
Fig. 3.	Double	...	...	per doz.	20/	26/	32/	39/
	Ditto, perforated...	...	...	"	24/	32/	38/	46/
Fig. 4.	Single...	...	...	"	9/	11/6	13/6	16/
	Ditto, perforated...	...	...	"	11/	14/	16/	19/
Fig. 5.	Vests	"	...	"	27/	34/	42/	51/

FELT, ASSORTED SCARLET AND WHITE.

					No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double, best...	...	per doz.		17/	22/	27/	33/	44/
	Ditto, second	...	"		14/6	19/	23/	28/	37/
Fig. 4.	Single, best ...	...	"		7/6	9/6	11/	14/	20/
	Ditto, second	...	"		6/6	8/	9/6	12/	16/
Fig. 5.	Vests, Scarlet	...	"		17/	22/	27/	33/	40/

FELT, NATURAL UNDYED WOOL.

					No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double	...	per doz.		18/	24/	30/	36/	50/
Fig. 4.	Single...	...	"		8/	10/	12/	16/	22/

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.

SKIN ROUGHNESS.

We are fast approaching the season of the year when gentle and simple alike will complain of skin-roughness; that disagreeable ailment, slight enough to demand no medical care perhaps, but tormenting enough to cause a great deal of worry and anxiety of mind. The fair sex especially are liable to suffer greatly from skin-roughness in autumn and winter, and it is naturally a much more annoying thing for women to exhibit any skin-defect than for men.

The cause of skin-roughness is usually exposure to sudden variations in temperature, and it must be admitted that in our British climate we are specially subject to this species of social evil. The minute blood-vessels (or *capillaries*) of the skin are congested, and a kind of incipient inflammation takes place in the upper and under layers of our body-covering. This has the effect of causing the scarf-skin (or *epidermis*) to be less perfectly formed than usual, and as its cells become also more readily detached, the too familiar appearance of roughness is produced. In addition, the use of impure face powders, and of coarse soaps loaded with alkali, as well as unwise living are to be reckoned with as causes of the skin-ailment under notice.

We advise those who are subject to this ailment to supervise well their habits in the way of foods and drinks first of all. A diminution of flesh-foods and an increase of vegetables is to be recommended. If there has been any tendency to excess in alcohol, this must be corrected; but at the same time it is to be borne in mind that in many cases of feeble digestion (exercising a paramount influence on the skin) a little alcohol, taken at meals only, is often of great service. The patient should be very particular regarding the soap he or she uses. Vinolia Soap is one of the best brands, simply because it is pure and contains no injurious alkali, and exhibits besides an excess of the emollient fat which is healing and grateful to the skin.

Of course the skin in such a case requires an external application, and for this purpose let us recommend to our readers' notice Vinolia itself, which is a most excellent skin-dressing. At night especially the skin, when rough, should have this agreeable application rubbed on, and when exposure to the cold winds is threatened a very thin coating of Vinolia will protect the epidermis. These are simple but effective means of cure for skin-roughness; and when the sterner sex complain of this ailment after shaving, we can only add, let them try Vinolia before using the razor, and apply it also at bedtime.

SAMPLES SUPPLIED FREE TO MEDICAL MEN ON REQUEST.

Prices.—“VINOLIA” (for Eczema, Pruritus, &c.), 1s. 9d. and 6s. per box; “VINOLIA” SOAP (Toilet), 2s. 6d. per box of 3 tablets; “VINOLIA” SOAP (Medical), 2s. per box of 3 tablets.

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This section of "The Chemist and Druggist" must be closed for press by Thursday noon of each week. Remittances payable to EDWARD HALSE.

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Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.," and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us, accompanied by a commission of 6d. if the amount is £3 or under; and 1s. if over that sum. We acknowledge receipt of deposit to both parties, and hold the money until we are satisfied that either the goods are returned to their original owner or the purchase is completed.

Postal orders and cheques sent as deposit must be made payable to Edward Halse, and crossed "Martin & Co."

FOR DISPOSAL

Formulæ.

Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

Proprietary Articles.

Compound sulphur lozenges, 1s. lb.; Bland's pills, 10 gross, 5s. 6d., carriage paid. Davidson & Gray, Dundee.

Drugs and Chemicals.

Potass. iodid., several pounds; what offers? 124/20.

Poppy heads.—5s. 1,000; bag 6d.; sample 3d. Connor, Chemist, Doncaster.

Extract gentian, 6d. lb., 14 lbs. at 5d.; 1 lb. ol. cubebæ aug., 40s.; ess. strawberry, 1s. lb.; sapo Castil. alb., 3½d. lb.; styptic and vesicating collodions, 2s. 6d. lb. Padwick, Redhill.

Literature.

Bentley's "Botany," 5s. Wilson, 9 Leeming Street, Mansfield.

Cassell's "Family Physician," good condition; what offers? 134/29.

Maclaren's "Atlas," latest edition, cost £3, will take £1 15s. Fletcher, 2 Carr Lane, Hull.

Cheap—*Pharmaceutical Journals*, 14 years, 1871 to 1884, for 10s. Upjohn, Chemist, Barnes, S.W.

What offers?—Quain's "Medical Dictionary," 6 volumes; quite new; unsold; cost 30s. 131/20.

Bentley's "Botany," as new, 5s. 6d.; Garrod's "Materia Medica," 4s.; Lindley's "School Botany," 2s.; Barber's "Pharmacopœia," 1s.; Squire's "Hospital Pharmacopœia," 1s. 6d.; Piesse's "Perfumery," 4s. 6d. W. P., 28 Garibaldi Street, Grimsby.

Richardson's "Mechanical Dentistry," excellent condition, 10s.; Tomes' "Dental Surgery," 6s.; Carpenter's "Physiology," 3s. 6d.; Miller's "Surgery," 3s. 6d.; Royle's "Materia Medica," 3s. 6d.; Fowne's "Chemistry," 4s. Watt, Chemist, West Hartlepool.

Chemist and Druggist, 20 years' copies; a repertoire of valuable information and recipes; also educational books, useful for preparing for Prelim.; sale or exchange. Duncan, 21 Barton Street, Gloucester.

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The entire fittings of a small chemist's shop; counters, drawers, shelves, bottles, jars, &c. Tomlinson Bros., Chemists, Prestou.

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12 boxes choice 1885 Havana cigars, cost 34s., price 25s.; 25/50's choice cigars, cost 11s. 6d., price 6s. 6d. per 50; good condition; also 10 boxes choice cigars in dispute, cost 15s., price 9s. 6d. 100. Slater, Beeston Hill, Leeds.

Shop fittings for sale, very cheap.—Several nests of drawers, glass showcases for walls and counters, shop rounds, carboys, desks, counters, and entire fittings of a large shop, will be sold together or separate, at nominal prices. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

For sale, bargains.—All numbers refer to Maw's illustrated list.—Counter cases, plate glass, fig. A18, 6 ft. long, 5½ ft. 8 ft., 6½ ft. 10s.; toothbrush cases, A10, 30s.; ditto, A9, 30s.; A16, 30 in. long, 45s.; 3 ft. long, 50s.; 3 ft. 6 in. long, 55s.; 5 ft. 6 in. long, 57s.; A4, 13 ft. 6 in. upright and bent plate-glass case, 57s.; ditto, 4 ft. 6 in. long, flat case in front, 80s.; desk and case, plate glass and mahogany, 35s.; 6 ft. dispensing screen, plate glass and mahogany, 47. 10s.; 5 ft. ditto, 90s.; plate-glass case fronted counters, mahogany tops, 5 ft. long, 6 ft. long, 10 ft. long; 14 ft. mahogany counter; specie jars, carboys, bottles, jars, scales, show stands, 3 glass shelves, 60s., worth 57. 10s.; mahogany wall case, 9 ft. 9 in. long, 8 ft. 10 in. high; ditto, 6 ft. by 4 ft. high; ditto, 4 ft. by 5 ft. 6 in. high; 24 doz. shop rounds, assorted, 6s. 6d. doz. all round; 23 4-lb. blue ointment jars, 42s. the lot; pink ditto, cheap; dispensing scales, 12s. 6d.; pill machines, 12s. 6d.; mortars very cheap, surgical instruments cheap. Upright dispensing case, 8 ft. 2 in. long by 32 in. high, 67. 10s.; dispensing screens, with silver glass centre, cases at each side, mahogany and plate-glass, from 57s.; two fancy iron pedestal carboy stands, each to hold two, 25s. each; mahogany ditto, as fig. 270, 30s.; sponge cases, as fig. A41, 37s.; ditto, ditto, as fig. A43, 47. 15s.; 16 ft. drawers, shelving, lockers, cornice, complete, 97. 10s.; outside lamps, &c. A large stock of all kinds of fittings cheap. Elkanah Natali, 207 Old Street (near County Court), Shoreditch, London. No connection with any other house.

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Halse's £10 10s. galvanic apparatus, equal to new, price £5 5s. Prosser Roberts Co., Chemists, Camberwell.

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Miniature slate-bed billiard-table, also 8 ft. folding bagatelle board; each with balls and all fittings complete; price £3 10s. and 45s. respectively. Halford, Chemist, Hockley, Birmingham.

Brass paste, Helmet brand, 1d. tins, 4s. 6d. gross —10-gross lots, 4s. gross; 50-gross lots, 3s. 6d. gross. Rice starch, 1-lb., ½-lb., and ¼-lb. fancy picture boxes, 56-lb. cases, 21s. 6d. per cwt. Best paraffin matches, small, 50-gross case, 27. 10s.; large, 1s. 4d. gross in 25-gross cases, free on rails Hull. Send stamps to cover cost for sample. Beckett, Barmston Street, Hull.

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Wanted, small petroleum force pump. Townley, Keswick.

Dental chair, nitrous-oxide gas apparatus, spittoon. 129/8.

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Sequah's oil and medicine wanted. State lowest price to 132 Huddersfield Road, Oldham.

Wills' "Materia Medica," latest edition; good condition. W. E., 2 High Street, Ventnor. B. P. 1885, or Attfield's "Chemistry" (latest), both good condition. A. E. Marshall, Balsall Heath Road, Birmingham.

Coleman's "Dental Surgery"; Oakley Cole's "Dental Mechanics"; Underwood's "Notes on Anæsthetics"; Webb's "Operative Dentistry"; Taft's "Operative Dentistry"; Quinby's "Notes." Watt, Chemist, West Hartlepool.

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Increased action by the addition of Boracic Acid and a mild rubefacient, by which the activity of the cutaneous glands is stimulated, and their power of absorption increased.

We have succeeded in greatly increasing the therapeutic value of Belladonna and other Plasters.

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The attention of manufacturers of Medicated Plasters has hitherto been directed chiefly toward perfecting the mechanical excellence of their preparations, overlooking, to a certain extent, the real end and aim for which Plasters are made.

The extent to which counter-irritants, solvents, detergents, &c., can be utilised in Plasters to produce a mechanical chemical alteration of the epidermis, thus rendering the skin more absorptive, has been largely if not entirely overlooked.

By the addition of Boracic Acid and a mild rubefacient to the regular Belladonna Plaster formula, several important advantages are secured. The fatty matter in the pores is dissolved by the detersive action of the former, and the glands are expanded and stimulated by the counter-irritative action of the latter, by which means not only is a larger proportion of the medicinal element of the Plaster absorbed, but the therapeutic effect is both increased and more rapidly obtained.



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The increasing demand for antiseptic agents in a convenient form has induced us to prepare Corrosive Sublimate Tablets after the following formula:

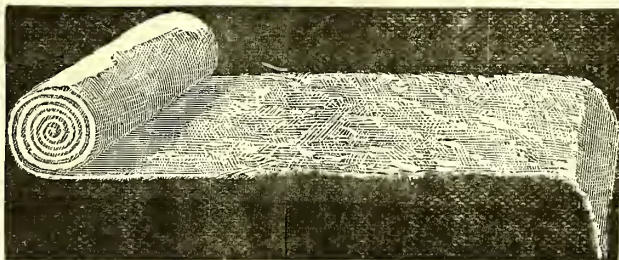
Corrosive Sublimate, gr. 7, 3.

Ammonium Chlor., gr. 7, 7.

The ammonium chloride is used to make the solution permanent so that the corrosive sublimate will not be precipitated by the organic matter usually contained in water. Each Tablet contains the requisite amount of corrosive sublimate to make a solution of 1-1 000 when added to a pint of water.

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Rolled with Tissue Paper between them to prevent felting.

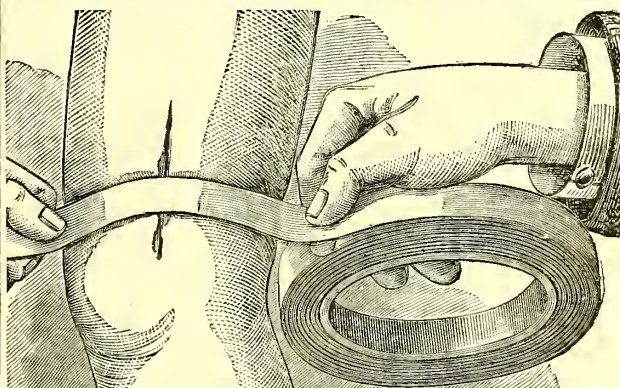


Cotton in this form is as easily applicable as an ordinary cloth bandage.

Its advantages can be seen at a glance.

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"We are, yours truly, H. C. BAILDON & SON."

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"We cannot, we think, do better than tell you that of the Syphon

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Ginger, Orange, Lemon, Raspberry, Black Currant, &c.

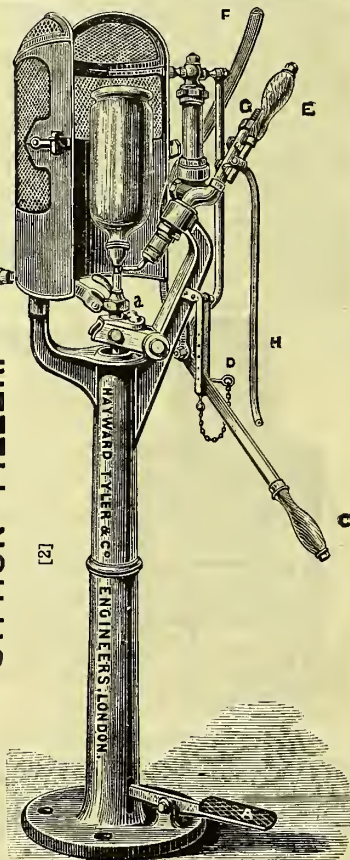
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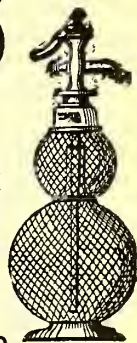


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SOLUBLE ESSENCES

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A Pure Essence of the Finest Ginger.
Trade Price 5/ per lb.; 12 lbs. and upwards, 4/6.

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Trade Price 5/6 per lb.; 12 lbs. and upwards, 5/.

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For Second Quality Ginger Ale.
Imparts Pungency, Colouring, great Brilliance, and an unusually Fine Ginger Flavour and Aroma.
Trade Price 4/6 per lb.; 12 lbs. and upwards 4/.

HAY'S GINGER ALE ESSENCE,
For Third Quality Ginger Ale.
This Essence makes a beverage that is unsurpassed by the so-called finest Belfast Ginger Ale.
Trade Price 9/ lb.; 12 lbs. and upwards, 8/6.

THESE ESSENCES
Have obtained the Highest Testimonials from all the Medical Journals, and from the Principal Trade Journals in this and other countries.



For ORANGE, VANILLA, and all other Essences,
SEND FOR PRICE LIST.

HAY'S HOP ALE ESSENCE.
For the manufacture of the Finest Aerated Hop Ale. This Essence is made from the choicest Hops grown, and is unrivalled for its peculiarly fine Hop Flavour and Aroma. Hop Ale made from this Essence has the full flavour of the finest Hops, and is a really appetising Bitter Beer.
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No. 1. Highly Concentrated.
Trade Price 8/6 per lb.; 2 lbs. and upwards 8/.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS;
No. 2. Makes an exquisitely fine Lemonade.
Trade Price 8/6 per lb.; 12 lbs. and upwards, 6/.

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Imparts a Lemonade all the Fine Aroma and Flavour of the choicest Lemons.
Trade Price 5/ per lb.; 12 lbs. and upwards 4/6.

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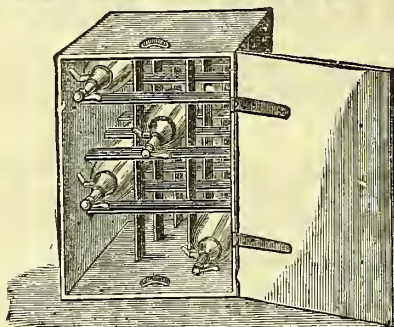
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Cases Lined with Tin, Zinc, Copper, &c.;

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FOR THICK LIQUIDS.

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Used Extensively by Manufacturing Chemists and Druggists.

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FILTERING CLOTHS OF EVERY DESCRIPTION.

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FOR FILTERS

Perfect in Mechanical and Chemical Action, Reliable, Durable, Easily Cleaned.

LIPSCOMBE, OXFORD STREET, LONDON, W.

Makers to the Royal Family,

Original & sole inventor of the celebrated improved Filter

The ONLY GENUINE are made SOLELY by the Sons of the late Mr. Lipscombe. As there are watches and watches, so there are Filters and Filters, and the Trade are Cautioned against feeble Imitations of Lipscombe's Filters. To avoid grave disappointment, address—
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This Caution is necessary as we have no connection with any other Firm TRADING under the same name—Caveat Emptor.

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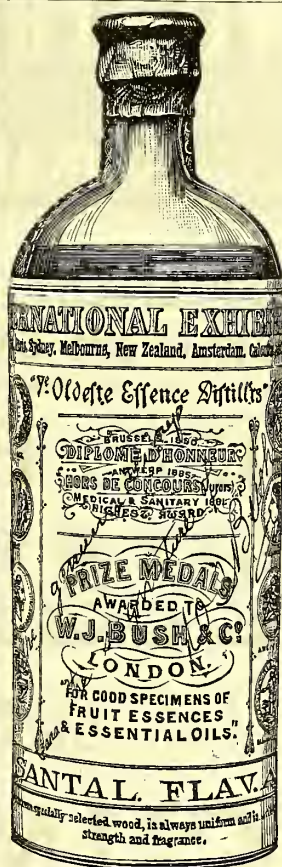
W. J. BUSH & CO.'S

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ESSENTIAL OILS.

Packed in Original 1-lb. Bottles.

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ALL OWN DRAWING.

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It is imperative that Chemists and others requiring Essential Oils for medicinal purposes should purchase genuine and finest qualities only. These can only be obtained from W. J. BUSH & CO., who supply them as above, in 1-lb. Bottles, and guarantee their quality and purity. *Nearly all Essential Oils offered in the Market are impure.*

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MANUFACTURING CHEMISTS, DRAWERS OF ENGLISH ESSENTIAL OILS,
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INDENTORS SHOULD SPECIFY OUR
MANUFACTURE.

Soluble & Fruit Essences,
ESSENTIAL OILS, COLOURS,
 And all requisites for the **AERATED WATER TRADE**
DUCKWORTH & CO.
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Our Preparations are **SPECIALLY** Manufactured to meet
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“PREMIER BRAND” ESSENTIAL OILS.

Concentrated Fruit Essences—Soluble

MANUFACTURED BY

JOHN CUMMOCK

*Who has received Hundreds of Unsolicited Testimonials, also THREE GOLD MEDALS,
besides other Honours.*

Chemists manufacturing their own Aërated Drinks should write for Prices and Samples of the following:—

ESSENCE “SPARKLING LIMETTA”—Soluble “Essence of Lemon”

ESSENCE “LEMON SQUASH”—Essence for Sherbet

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AND COMPARE WITH OTHER MAKERS.

Manufactory & Offices: 45 ROPE WORK LANE, GLASGOW.

LATE 32 MAIN STREET.

The Chemist and Druggist

SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, NOV. 9, 1889.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

OFFICES: 42 CANNON ST., LONDON, E.C.

IMPORTANT.

"THE CHEMIST AND DRUGGIST" SUPPLEMENT, to be published on Saturday next, Nov. 16th, will have a bona-fide Circulation of not less than **12,000 COPIES**. Chemists desirous of purchasing or disposing of a Business, or in want of Assistants, or Assistants requiring Situations, should take advantage of this opportunity, as the circulation of this medium is the largest of any in the Drug Trade. Copy of Advertisement, with remittance, should be sent by Thursday, Nov. 14th, but we can take advertisements by First Post on Friday morning.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. Orridge & Co. has been known as a Transfer Agency since the year 1843, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1. **£1,242.—LONDON, E.C.**—Good family Retail and Dispensing Business, with some good specialties attached; returns average £1,242; net profits £450 to £500; well-fitted shop and good stock; about £1,250 required.

2. **£500.—LONDON, N.**—Profitable Retail and Dispensing; returns £500 yearly at good prices; well-fitted shop, and good stock; rent, £50 on lease; price £500 or offer.

3. **£700.—LONDON, S.W.**—Good-class Dispensing and Retail; returns last year over £700; single-fronted shop, handsomely fitted, and good stock; vendor will sell at valuation if wished, or open to an offer.

4. **£1,200.—LINCOLNSHIRE.**—General Retail and Mixed Business, established over 50 years; returns £1,200 yearly, with good profits; large shop, well fitted, good stock; about £850 required.

5. **£550.—EASTERN COUNTIES**—Unopposed good-class Retail and Dispensing Business; returns nearly £550; large double-fronted shop and good stock, convenient house, good garden, &c.; about £500 required.

6. **£1,000.—DERBYSHIRE.**—Fashionable town; Retail and Dispensing; all first-class trade; returns over £1,000; well-stocked shop, and good house, on lease; terms, valuation only required—no premium.

7. **£450.—SURREY.**—Unopposed country Business of good class; returns about £450 yearly; can be much increased; newly-fitted shop and good stock; convenient house and good garden; price about £350.

Gentlemen prepared to invest about £3,000 are invited to apply to Messrs. Orridge & Co., regarding several Country Businesses, Wholesale and Retail combined.

8. **£700.—SUSSEX.**—Attractive locality; first-class Country trade; returns last year nearly £700; single-fronted well-fitted shop and good stock; large house; rent £34; price about £600; reasonable offer considered.

9. **£600.—ISLE OF MAN.**—Retail and Dispensing Business; very profitable; no cutting; returns nearly £600 yearly; expenses very low; price £400; no qualification necessary.

10. **£1,300.—WALES (SOUTH).**—Very old-established Mixed Business; held by the late owner many years; returns £1,300 yearly under assistant; can be much improved by principal; well-fitted shop and good stock; about £850 required.

11. **£670.—SURREY.**—Country Business of good class; returns £670 yearly with good profits; well-fitted shop and good stock; comfortable house, with garden; low rental; valuation and small premium.

12. **£1,000.—LINCOLNSHIRE.**—Good market town; Family and Agricultural Business; returns £1,000 yearly; good prices; double-fronted shop, well-fitted; large house, with private entrance; valuation of stock and fixtures only required.

13. **£800.—PLYMOUTH.**—Good-class old-established Retail and Dispensing Business; held by the vendor 20 years; returns £800 yearly, with good profits; well-fitted corner shop and good stock; good house attached; price about £475; worth attention.

14. **£700.—STAFFORDSHIRE.**—Main and branch for disposal; branch recently established; gross receipts £350; both businesses well-fitted and stocked, and returns increasing; about £700 required.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London agent.

SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

MESSRS. ORRIDGE & Co. Register Vacancies for Situations **FREE OF CHARGE**.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

F. J. BRETT,

VALUER, LEICESTER,

60 St. Stephen's Road.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE.

LONDON (pretty suburb).—Unopposed Light Retail, Dispensing, and Prescribing, with fittings, agency, good house, garden; returns £1,200; profit £450; price £800.

SALOP.—Light Country Retail, capable of increase; returns £350; price £300, or valuation.

LANCASHIRE.—Profitable old-established Retail and Prescribing; vendor, having realised a competency, retiring; returns £350; price £1750.

LIVERPOOL.—Retail and Prescribing; good situation for Docks; returns £3 week; energetic man could double; price £270; open to offer.

DEVONSHIRE.—Good-class Light Retail, Prescribing, and Dispensing; returns £300; price £700.

To Parties refitting.—F. J. Brett is instructed to offer the entire fittings and stock, either separately or together, of a well-stocked shop on advantageous terms.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

TO be Disposed of, an established Drug and Dental Business, near Regent's Park; can be purchased for value of stock and fixtures, say £80. Address, Mr. Reakes, 1 Charles Street, St. John's Wood.

SOUTHPORT.—For immediate disposal, an old-established Light Retail and Dispensing Business; good opportunity. Apply for full particulars to Willows, Francis & Butler, 101 High Holborn, London.

TO be Sold, in a large manufacturing town in Yorkshire, a good Mixed Business; stock, fixtures, &c. at valuation for cash; illness cause of disposal. Full particulars on application to J. White, 8 Princes Street, Bishop Auckland.

FOR Sale, a genuine Light Retail and Prescribing Business, in a large manufacturing town, Lancashire; returns £450; rent £32; central situation; trial allowed; cash £300. Apply to view, "Climax," John Thompson, Wholesale Druggist, Hanover Street, Liverpool.

CHEMISTS' London, S.E.; 40 years in hands of present proprietor; main thoroughfare, populous district; returns £500, all ready money; much neglected owing to ill-health; good house, garden, private and back entrances; rent £50; 6 years unexpired; price £550. Apply, 189 High Street, Deptford.

SOUTH WALES.—In Market town, a thriving Dispensing, Wholesale and General Business; returns £1,100; splendid stock; trade steadily improving; rent £30; price £600 or valuation; satisfactory reasons for disposal. Full particulars from "Silurian," care of Barron, Harveys & Co., Giltspur Street, E.C.

EASTERN COUNTY.—A genuine Country Business doing a good-class Retail and Prescribing business with some Agricultural trade; returns £1,000; same hands 50 years; excellent residence and garden; rent only £35; price £350. "Lines," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR Disposal (Midlands), Chemist's Business in large town; busy thoroughfare; well fitted, good stock; prescribing and mixed retail; no booking; rent and rates low; profits good; good opening for dentistry; price £200. Apply, "Iodine," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

DENTAL Practice.—Old established, advertising, in one of the largest manufacturing towns in Yorkshire; average returns for last 3 years £350; 10-roomed house; rent £22; declining health cause of retiring; price £100 cash; every information given. George Duncan, 19 Gloucester Terrace, Leonard Street, Hull.

SURREY.—A Light Retail and Prescribing Business, returning £500, good prices, to be sold for little more than value of stock and fixtures £325; convenient house and long garden; strictest investigation courted and every proof as to trade done. T. B., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CHEMISTS'—£150.—Light Retail and Prescribing; only opened a few months; doing £4 per week; good profits; capable of unlimited increase; no opposition; genuine reason for selling; well fitted, &c.; outside lamp; rent £26; good house; worth attention. Apply, T. S. Clydesdale, Park Road, West Ham, Essex.

CHEMIST and Druggist Business to be sold; splendid position in densely populated locality; capital house, which could be let off; shop with modern fittings; first-rate opening for an energetic man; rent £40; price £200, to include stock and all fixtures. Apply to Mr. Alfred Richards, Auctioneer and Estate Agent, Tottenham.

£1,189 RETURNS.—For immediate disposal, a good-class Retail and Dispensing Business in an exceedingly healthy and rising locality, within a few miles of London and quite unopposed; commodious house and small garden; stock and fixtures in good condition; price £300; every investigation allowed; principals only. "Finol," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MR. SYDNEY GREENWOOD,

Chemists and Druggists' Transfer Agent, Valuer to the Drug and Allied Trades,

PITTVILLE HOUSE, Lea Bridge Rd., CLAPTON, N.E.

1. **LONDON, E.C.**—Returns £1,500; corner; 73 ft. frontage; 21 years' lease, at low rental; suit Wholesale or Retail; important main thoroughfare; price £1,000; £800 remain. Another, £750; price £400.

2. **KENT COAST**.—Returns £1,500; old-established Business in fashionable town; large shop, splendid house; low rent; sacrifice for £650; owner retiring; part can remain.

3. **SOUTH COAST**.—Returns £700 (death vacancy); old-established Business, in good position; price £450. Another, returns £500; price £400, cash; owner selling through infirmity.

4. **ESSEX COAST**.—Unopposed Business, capable of increase; good town; returns £350; good stock; shop is well fitted; rent £25; nice house; net profits over £150; price £300 (or offer).

VALUATIONS

A Speciality. Write for terms to Mr. SYDNEY GREENWOOD (as above), who will give the matter his prompt attention.

BUSINESSES FOR DISPOSAL—Continued.

HAMPSHIRE.—Genuine old-established Light Retail and Dispensing Business; returns about £700; net profits £300; good opening for Dentist; will bear the strictest investigation; owner retiring. Address, "Myrrh," Messrs. Wright, Layman & Umney, 50 Southwark St., London.

LONDON, S.E.—Returns £700; in busy thoroughfare; General, Retail, and Prescribing, returning as Branch £700, and capable with personal attention of being doubled; price £250 or valuation; to a man of small capital this presents an unusual opportunity. F. J. Brett, Valuer, 60 St. Stephen's Road, Leicester.

BUSINESSES WANTED.

WANTED, small Business, payable by instalments; security given; by energetic man, with large experience. W., 113 Riversdale Road, Highbury, N.

A RELIABLE Retail and Dispensing Business, returning from £800 to £1,000, in the Midlands or South of England; good house indispensable. Write, stating lowest price for cash and all particulars, to "Minor," care of Mr. Havers, 6 Union Road, Clapham, S.W.

WANTED, a genuine Business returning £800 to £1,000, within an hour or two of town preferred; state number of rooms in house, and if any garden; advertiser is prepared to pay cash down to £800. "Lux," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TENDERS.

CHESHIRE.

THE old-established Business of Mr. William Isaac Bates, Pharmaceutical Chemist, Mill Street, Macclesfield, will, in consequence of his sudden and permanent incapacity, be offered for sale by Tender, which may be sent in by Friday morning, the 15th of November, to W. Bates, Esq., Park Green, Macclesfield.

The present returns, which are entirely from counter and select family trade, are upwards of £1,400 per annum and increasing, and realise a profit of at least 33 per cent.

The accounts are kept with great precision, so thorough investigation is invited. The Stock and Fixtures, which have been valued by Mr. Thomas Tomlinson, Chemists' Valuer, Manchester, amount to the sum of £921 sterling net, and are in splendid condition. The inventory and prices can be inspected.

The whole Rent is only £50 per annum, and ten years' lease can be given to the purchaser.

The premises consist of good house with two entertaining rooms, six bedrooms, kitchens, cellars, and separate warehouse.

For information we may add that no offer for less than £200 goodwill will be entertained.

Further particulars if desired may be had from Messrs. Thos. Tomlinson & Son, 9 New Cannon Street, Manchester, or on the premises.

TO LET.

TO Chemists and Druggists.—Shop and Residence in a respectable and populous neighbourhood; no chemist within the radius of a mile; rent £50. Apply to Andrew Hart, 192 High Street, Stoke Newington.

TO LET.—Spacious premises, especially suitable for a Chemist and Druggist, in a commanding terrace of 25 shops, situate in the busiest and most rising thoroughfare in the South of London; large neighbourhood; splendid opening; the only shop unlet; good house accommodation for a substantial tenant; rent £90. Apply, Mr. Jenkin, 28 Queen's Parade, Clapham Junction, S.W.

PARTNERSHIP.

ADVERTISER wishes to meet with a young unmarried gentleman to co-operate in establishing a Drug, Chemical, and Photographic Apparatus Business in South London; densely populated district; no opposition; qualification not essential but desirable; capital required £100 to £150, under own control; no agents. Address, "Statim," 6 New Street, W.C.

APPRENTICESHIPS.

WANTED, well-educated youth as Apprentice, aged about 16, or Improver, in a good-class dispensing business. Apply, "Chemists," 165 Hagley Road, Edgbaston, Birmingham.

APPRENTICE wanted by a Chemist, Dispensing, Photographic, Manufacturing, and General Retail; easy hours; small premium. G. F. H. Bartlett, Qualified Chemist, Battersea. Also an Improver.

SITUATIONS OPEN.

INVOICE Clerk wanted, accustomed to drugs and chemicals. Apply by letter to H. P., Good & Son, Stationers, Moorgate Street.

AT once, a qualified Assistant with good dispensing and counter experience. Apply to Thos. H. Stewart, 107 Old Town Street, Plymouth.

PERFUMERY Department Manager wanted; must have first-class experience in manufacturing, &c. Lorimer & Co., Britannia Row, Islington, N.

GENTLEMANLY businesslike Assistant required for short engagement, probably for longer period. Apply, personally, 25 Broadway, Hammersmith.

RESPECTABLE young fellow wanted in office; not less than 16 years; may be just from school. Apply, "Chemically Pure," Cale Street Distillery, Chelsea.

SHARP youth (about 18) wanted for Invoice Desk; must be a good writer, and quick at figures. Apply by letter, Corbyn, Stacey & Co., 300 High Holborn, London.

WANTED at once, a good Junior Assistant, aged about 22 (indoors). Apply, stating full particulars and salary required, to W. Ham, 176 High Street, Hounslow, W.

WANTED, an experienced trustworthy qualified Assistant, not under 27 (outdoors), in a good mixed business in Yorkshire. Apply, R. F., c/o Evans, Sons & Co., Liverpool.

JUNIOR wanted immediately in a good-class business; must be a good dispenser; state age, salary, &c., and enclose carte. G. S. Simpkins, 75 High Street, Stourbridge.

AN Assistant, about 23 (indoors), for Light Retail, Dispensing and Photographic business; send full particulars, references, and salary expected. W. Hall, 118 Grey Street, Newcastle-on-Tyne.

REPRESENTATIVE wanted for South, Midland, and Eastern counties; must have a sound first-class connection; liberal salary to a good man. Lorimer & Co., Britannia Row, Islington, London, N.

TRAVELLER—Required young, active man, with good address, to call on Surgeons in suburbs; salary 10s. per week with commission. 137/17, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR or Improver in good business; from 17 to 20 years of age. Address, giving all necessary particulars of experience; salary required, height, &c., to Frederick Gibson, 91 Gooch Street, Birmingham.

WANTED, an indoor Assistant, between 20 and 30, for mixed business; able to prescribe and extract teeth. Apply, stating age, height, and salary, with references, to Aspinall, Chemist, 56 Market Place, Wigan.

DISPENSER required by Surgeon, in town of 12,000, 20 miles from London; morning, afternoon, and evening (about 4 hours altogether); time for other employment. Apply, stating terms, to Dr. Male, Grays, Essex.

ACTIVE and obliging Junior or Improver (indoors), accustomed to mixed business; exceptional help and time for study to one reading for Minor. Apply, with full particulars, to John B. Broadbent, Honley, Yorkshire.

WAREHOUSEMAN.—A Provincial firm of Wholesale Druggists require a competent Warehouseman for Dry Counter. Apply, in first instance, to X. Y. Z., care of Messrs. W. Sutton & Co., 76 Chiswell Street, London.

INDOOR Assistant; competent to take charge; used to Country Retail, and be able to dispense. Apply, with photo (to be returned), giving references, age, salary expected, &c., to C., Messrs. Heaton, Squire, Coleman Street, London, E.C.

DRUG Trade (Wholesale).—Young man wanted for the laboratory; must be thoroughly experienced in the manufacture of pharmaceutical preparations. Apply, Secretary, General Apothecaries' Company, 49 Berners Street, W.

WANTED immediately, a qualified Assistant, accustomed to first-class Dispensing and Retail business; must be steady and of good business habits. State age, height, and give full particulars in application, enclosing photo, to Mr. Lester, Pharmaceutical Chemist, Cork.

A FRENCH firm of Chemical Manufacturers wishes to engage the services of an Engineer or Chemist with a practical knowledge of the manufacture of Sulphate of Copper. Applications to be addressed to 162/35, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED as Assistant (indoors), where Junior is kept, a reliable man; Wesleyan preferred; good Prescriber and Dispenser. Apply, enclosing references and carte (to be returned), and stating age, height, and salary required, to Walker, Chemist, Church Street Branch P.O. Preston.

A MARRIED man, who would accept free rental of four rooms, kitchen, and gas, over Chemist's shop, in a leading suburban thoroughfare, for a little daily help, and care of premises; no other residents. Address, "Mutual," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED for India, an experienced Assistant, aged about 24, one having had experience in Photographic and Chemical Apparatus preferred. Apply, by letter only, giving full particulars of previous engagements, to B., care of Messrs. John Moss & Co., Galen Works, Wilson Street, S.E.

WANTED, in all the principal centres throughout the world, Agents for the sale of Madame Lamplough's world-famed "Rosine," for the use of all who value health and good looks; now being well advertised. Apply, by letter, to Messrs. Cannon & Co., 86 London Street, Greenwich, London, S.E.

WANTED, an outdoor Assistant with unexceptionable references; one seeking a permanency, and accustomed to a country business and extracting teeth preferred. Address, stating age, height, salary required, and references, enclosing photo (to be returned) to S., Messrs. Wyleys & Co., Coventry.

IMMEDIATELY, Junior Assistant; of good address, quick, and obliging; age not under 20; time for study; a good opportunity for one wishing to work up for exam.; no heavy work. Apply, stating age, height, salary required, with references, enclosing carte-de-visite, to Jacob's Medical Hall, Guildford.

PUBLIC ANALYST.—The Vestry of St. Giles, Camberwell, are prepared to receive applications for the appointment of a Public Analyst under the Sale of Food and Drugs Act, 1873, from the 1st of January next. Candidates must have competent knowledge, skill, and experience, and be fully qualified to perform the duties of the office. The appointment is subject to the approval of the Local Government Board. The fees payable are on a scale fixed by the Vestry, and average about £160 per annum. Applications must be forwarded, with copies of not more than three testimonials, to the Vestry Clerk, endorsed "Public Analyst," not later than the 15th November. G. W. M. MARSDEN, Vestry Hall, Camberwell, S.E., 6th November, 1889. Vestry Clerk.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

PART-TIME: outdoors; London experience. C., 16 Priory Park Terrace, Kilburn.

MAJOR, aged 24; good references; disengaged. D. A. C., Crimea Cottage, Arbroath.

JUNIOR: City or West-End; personal application. T. Morris, 6 Beauchamp Road, Lavender Hill, S.W.

ASSISTANT: Part-time or short hours; London or suburbs preferred. B., 5 Market Place, Brigg.

IMPROVER seeks engagement; no salary required first three months. T. Howells, Aubrey Terrace, Cowbridge, Glam.

AS Managing Assistant, or Branch or Temporary; aged 30; good experience; now. "Lon," 12 Fouberts Place, W.

BRANCH Manager; terms moderate; Tooth Extractor (unqualified); aged 30. "Chemist, 44 Liner Road, Fulham.

AS Improver; would give 6 months without salary; indoors; aged 21; disengaged; abstainer. X., 62 City Road, Bristol.

VETERINARY Surgeon's or Agricultural business; Improver, aged 18, height 5 ft. 10 in. A. G., Pharmacy, Southbourne-on-Sea.

DISPENSER or Counterman; recent references; outdoors; low salary to enter good firm; 16 years' experience. 55 Benwell Road, N.

AS Junior, in large town or good place of business; qualified; good reference; outdoors preferred. G. C., Mr. Sawyer, Chemist, Carlisle.

AS Chemist's Assistant or Surgeon's Dispenser; aged 30; Dentist; good references; could manage branch. "Vigilans," Blake's Hotel, Andover.

IRISH Agency.—Commercial man, resident in Dublin, well known, will represent first-class Manufacturer or Wholesaler amongst Grocers, Chemists, &c.; best references and security. "Agent," care of Mr. West, 13 College Green, Dublin.

TEMPORARY.—In or out of doors; good references. Morris, 68 King Street, Ramsgate.

ASSISTANT; good references; aged 27. A., 11 Beauchamp Place, South Kensington.

LOCUM-TENENS, or otherwise (28). "Pharmacy," 105 Guildford Street, Russell Square, W.O.

OUTDOORS or Branch; good Prescriber; aged 24; disengaged. Sines, 39 Crown Terrace, Richmond.

AS Dispenser, whole or part-time; terms moderate. "Student," 11 Faunce Street, Kennington Park Road, S.W.

JUNIOR ASSISTANT; 23; 8 years' experience; abstainer; disengaged. W. T., 29 Congreve Street, Birmingham.

TEMPORARY, during absence; long experienced; gentlemanly address; moderate terms. "Ph," 39 Powis Square, W.

TRAVELLER (on commission), calling on Chemists, &c., is open for offers. "Chemist," 105 Guildford Street, Russell Square, W.O.

MANAGER or Traveller (town); married; 37; excellent references. X. Y. Z., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AS Junior in good-class Dispensing business; 4 years' experience; height 5 feet 10 inches; aged 20. "Statim," Apothecaries' Hall, Llanelli.

ASSISTANT, Dispensing and Retail; fluent French; good reference and experience; aged 22; abstainer. Leseigneur, Villot St. Martin's, Jersey.

MANAGER, temporary or permanent; aged 38; qualified; disengaged. 128/6, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGE Branch or Assistant; good references and experience; abstainer; aged 24. Hall, care of White, Chemist, Kingsmead Square, Bath.

AS Junior to Chemist and Druggist; 4½ years' experience; first-class references and testimonials. Address, stating terms, Thorne, Market Drayton.

MINOR requires engagement; experienced; married, no family; good references; salary £100 out, or equivalent indoors. Green, Isham, Wellingborough.

ADVERTISER (28), 6 feet, unqualified, married, *sine* encumbrance, thoroughly experienced and useful, seeks suitable berth. W. Membury, Yeovil.

RE-ENGAGEMENT in Wholesale at Wet Counter, or as Dispenser to surgeon; experienced in both capacities. H. Brice, 8 St. George's Terrace, Sheerness.

ASSISTANT; 6½ years' experience; aged 23; good reference; Liverpool or suburbs preferred; disengaged. "Statim," 114 Upper Hill Street, Liverpool.

ASSISTANT or Manager; *ætat* 23 years; married, no family; 12 years' varied experience; excellent references. Baines, Regent Street, Stoke-on-Trent.

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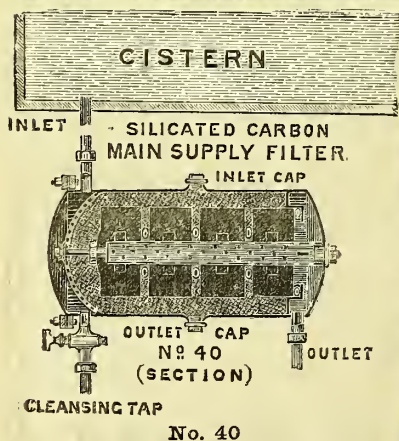
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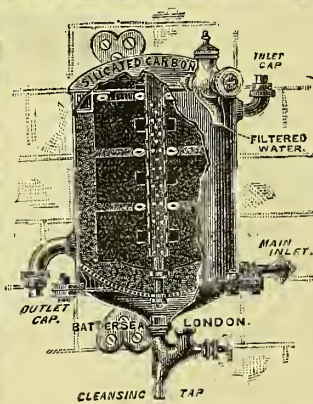
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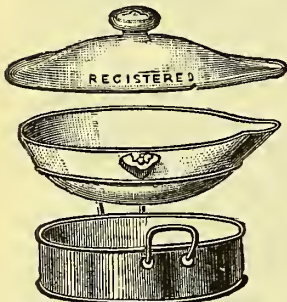
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The Midland Pharmaceutical Association of New Zealand.

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South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

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THE CHEMISTS' AND DRUGGISTS' DIARY for 1889 is now completed, and the Australasian issue has left the hands of the binders. Those copies were shipped by the s.s. *Orient* leaving London on November 8, and in all probability will be delivered to subscribers all over the colonies before the commencement of the new year. Copies for home subscribers will be distributed about the first week in December.

THE LIVERPOOL CHEMISTS' ASSOCIATION had a meeting on Thursday night at which Dr. Charles Symes read a paper on "Essence of Senna-pods" (which we print on another page), and Mr. Michael Conroy, F.C.S., made a communication on the adulteration of castor oil. It seems that some oil has recently been landed in Liverpool, as well as in London, which Mr. Conroy has found to be adulterated with cocoa-nut oil, and the object of his paper was to show how this adulteration could be detected. After some comments on the papers read, Mr. F. A. Brown exhibited an extemporised pin-hole camera, and Dr. Symes was to have initiated a discussion on the Pharmacy Act in its relation to unregistered assistants, but on account of the lateness of the hour this was adjourned until the next meeting.

POST-CARD COMPETITIONS.

We have been asked to reopen these competitions, which some time ago furnished some useful and interesting suggestions. We think the time is opportune, therefore, by this means to ask for assistance and advice on behalf of our old friend Mr. Blank, chemist and druggist, of Dulltown, who wants to know what is

THE BEST CHRISTMAS SUGGESTION

for his adoption. Shall he send out, as a gift to his customers, a pretty calendar, a household almanac, a chromolithograph, a sachet, an elegant Christmas card, or what? He wants the suggestion, whatever it may be, to be as definite as possible: that is to say, if it is to be a card, he would like to have the design; if it is to be something perfumed, he wants to know how it is to be done. He wants the thing to look nice, but at the same time not to cost too much; or, putting this the other way about, he wants to do the business as cheaply as he can without looking mean. With this explanation, we ask subscribers, their families, or their employes to help by sending us their designs or suggestions during the current month. Such must be sent in on post-cards; and November 30 will be the latest date we can receive cards in competition. The cards must be addressed to "The Editor of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.," and correspondents are reminded that if they write anything else on the address side (as, for instance, "post-card competition") surplus postage will be asked, and the cards will be rejected. We shall give one guinea for the best design or suggestion sent in; and if we get a sufficient response we will with pleasure add another guinea for second or second and third places.

THE CHEMICAL SECTION OF THE CHAMBER OF COMMERCE.—At the monthly committee meeting of the Chemical Section of the London Chamber of Commerce this afternoon the railway rates question came up for discussion. The Secretary said that the matter, as regards the drug and chemical trades, had not yet come before the Board of Trade Commission. The Chamber were carefully watching the proceedings, and the moment the matter came forward the sub-committee would be at once consulted, so as to enable them to bring up evidence to strengthen their case as much as possible. Up to the present the railway companies had made several concessions without any pressure whatever. In the wholesale drug trade lemon and lime juice had been moved from class 3 to class 2; carbonate of ammonia in casks and iron drums from class 2 to class 1. This reduction in classification involved a reduction in rates. In the general chemical trade glycerine had been taken from class 4 to class 3; crude anthracene from class 3 to class 2; copperas and silicate of soda from class 1 to class "C." With reference to the import duty on urethane a communication had been received from the Customs officials, in reply to one from the Chamber, stating that the amount imported was very small, and no complaints had been made by the trade as to its importation free of duty, and further that the caustic alkali process of testing could not be legally resorted to by the officers. Official information had also been received that butyric ether would in future be subject to a duty, and this had been communicated to the trade. A resolution was also adopted declaring that the committee is in general accord with the Australasian trade section in regard to their views on the clean bills of lading question, a matter to which reference was made in these columns a few weeks ago. We understand that, in addition to the articles mentioned above as having been placed by the railway companies in lower classes than was originally the case, the following reductions have also been practically conceded:—From class 5 to class 3, crucibles, not of clay; from 4 to 3, oleic acid; from 4 to 2, confectionery in casks and cases; from 3 to 2, argols or tartars, arsenic acid, glue, pickles, and sauces in casks or cases; from 3 to 1, common glass bottles, lump sugar, and wrapping-paper; from 2 to 1, mineral and aerated waters in casks or cases, distilled water, and size in casks or cases. The following articles, not now specially classified, have also been added:—Class 3: Xylonite, marble mortars, liquid ammonia in bottles (but not carboys) in cases or casks, spirits of turpentine in casks, or drums, and cotton-wool. Class 2: Rhubarb, bleaching-liquid in casks, and earthenware or stone jars.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BARNSTAPLE.

THEFTS FROM A CHEMIST.—At the Barnstaple police-court on Tuesday, Emma and Anne Smith (aunt and niece) were charged with stealing a number of articles from the shop of Mr. W. B. Britton, chemist, of Barnstaple, on Saturday. It appeared that the prisoners entered Mr. Britton's establishment and bought some trifling articles to the value of 5*d*. The assistant's attention being diverted to another customer, prisoners took several articles from the counter and put them in a basket which they had with them. Shortly afterwards the articles were missed, and prisoners were pursued and brought back to the shop, where certain of the articles were found upon them. Mr. Britton offered to accept payment for the stolen articles, which prisoners tendered. However, prosecutor found that they had stolen other articles than those paid for, and he gave information to the police, and handed over the money to them. Prisoners had been engaged in several other predatory expeditions in other parts of the town. The prosecutor expressed a hope that the Bench would take a lenient view of the case, and prisoners were accordingly fined 40*s*. each, or in default two months' imprisonment, time for payment being allowed.

BIRMINGHAM.

THE PREMISES of Mr. T. W. Chapman were sold by auction on October 31, and realised 1,500*l*. The premises are to be rebuilt, Mr. Chapman in meantime occupying another shop close by.

THE ELECTRICAL AND INDUSTRIAL EXHIBITION closed last Thursday. It has been a decided success, and local medical charities are to profit by it. Messrs. P. Harris & Co. were awarded a silver medal for their exhibit of chemicals and physical apparatus.

THE CLASSES of the Midland Chemists' Association are *in statu quo*—that is, *non est*. Three students applied for the chemistry class, and one for some other subject, and all have now commenced studying under the different tutors in the town, one having no less than ten applications, including four ladies.

MEDICINE AT THE KING'S NORTON WORKHOUSE.—A letter was read from the Local Government Board at a meeting of the King's Norton Guardians on Wednesday morning, calling attention to the fact that medicines were given out by nurses on the verbal instructions of the medical officer, and suggesting that the instructions should be in writing. The medical officer (Mr. Hollinshead) said this would be impossible in minor cases. All the poisons and more complicated medicines were kept under lock and key. On emergency the nurses had power to deal with simple cases, such as diarrhoea.

THE ABUSE OF MEDICAL CHARITIES.—Complaint is being made by the medical men who give their services to the several hospitals against the abuse of medical charity in this city. Figures have been produced in the daily papers showing the large increase of applications for treatment, many by people who can well afford to pay a medical man for his advice. As an outcome an influential meeting of medical men was held at the Medical Institute, Edmund Street, on Monday, when it was decided to hold a general meeting of the medical profession of the district on November 30 to consider the whole question.

BLACKPOOL.

MR. J. W. KEELING, grocer, occupies a page in one of the local newspapers in trumpeting the merits of a long list of the goods he sells, including patent medicines, &c. The list of patent medicines is not a short one, but apparently it is not exhaustive, as Mr. Keeling adds:—"As there is such an

enormous number of patents, it is difficult to always have everything in stock; anything not in stock will be procured at about 25 to 35 per cent. less than usual prices."

BOLTON.

FROM returns which have been prepared in connection with the Local Government Board inquiry, now being held at Bolton, into the proposed extension of the borough boundaries, it appears that of the 105,414 people who live in the borough, 106 are engaged in the drug, chemical, and kindred trades.

LIVERPOOL.

ASSOCIATED SOIRÉE.—The Association of the Literary, Scientific and Art Societies of Liverpool have fixed Wednesday, December 18, as the date on which to hold the soirée. Persons desirous of exhibiting on the occasion are requested to communicate with Mr. F. J. Leslie, 15 Union Court, Castle Street, in order to acquire the space necessary for that purpose. As no soirée was held last year it is desired to make the present one specially attractive.

WALKER ENGINEERING LABORATORIES.—On Saturday last the engineering laboratories, built and equipped at a cost of 20,000*l*., and presented to the University by Sir Andrew B. Walker, were formally opened. In the morning those invited to take part in the ceremony inspected the laboratories, the machinery being in motion, and its various purposes explained. At 1 P.M. there was a lunch, the Earl of Derby presiding. This was followed by some speeches, after which the company proceeded to St. George's Hall, where a public meeting was held, and the annual distribution of medals, prizes, &c., to the medical and other students of the college took place. Addresses were also given by Lord Derby and Sir John Cooke. There was finally a grand reception at the college in the evening, at which, in the presence of some 1,200 visitors, Lady Walker formally handed over the laboratories to the college. On Monday evening Sir Andrew entertained 1,200 engineers, mechanics, their wives, and lady friends at the same building.

PHARMACEUTICAL STUDENTS' SOCIETY.—The second meeting of the present session was held at the society's rooms, Colquitt Street, on Thursday, October 31, Mr. H. Wyatt, president, in the chair. Twenty-three members were present, and four new ones were elected. A paper entitled "The Flora of the Wallasey Sand Hills" was read by Mr. Wardleworth, in illustration of which he exhibited the following plants, which had been collected by him in the locality indicated:—Grass of Parnassus, rose of Bethlehem, wild thyme, silver weed, creeping willow, sea holly, sea cocœchrelers, rag-weed, bed-straw, sea violet, stone-crop, star-grass, arrow-rest, and Howard's-tongue. Mr. Wardleworth argued that in so apparently barren a locality as the Sand Hills there was much worth the attention of the student of botany, and that members of the society would be well repaid by a visit. In addition to the plants he had shown there were others of equal interest. A discussion arose as to whether star-grass was a true grass or sedge, the preponderance of opinion being in favour of the latter view. Four members were elected as reporters on the following subjects:—Chemistry, Mr. A. Shaw; materia medica, Mr. Walker; practical botany, Mr. Lomax; theoretical botany, Mr. Johnson. The president announced that the next meeting would be held on November 14, for which three papers had been promised—on "The Influence of Light on the Growth of Plants," by Mr. Johnson; "Pill-coating," by Mr. Grattan; "Dry Reactions of Simple Salts," by the president.

MANCHESTER.

THE CHAMBER OF COMMERCE completed on Monday its arrangements for the formation of sectional committees representing the trades and industries of the district. It is expected that the two or three pharmaceutical chemists who are members of the Chamber will take their places in a chemical and allied industries committee.

THE HOUSEHOLD STORES ASSOCIATION (LIMITED), which does a considerable business in patent medicines, held its

annual meeting on Wednesday at the Memorial Hall. The balance-sheet which was submitted showed gross profits amounting to 17,932/. A dividend at the rate of 6 per cent. was declared payable.

NEWCASTLE-ON-TYNE.

THE NORTH OF ENGLAND PHARMACEUTICAL ASSOCIATION.—The annual meeting was held in the University of Durham College of Science on Thursday, October 31, Mr. N. H. Martin, F.L.S., F.R.M.S., president, in the chair. The report of the council showed that the association now numbers 49 members and 30 associates, and that the library contains 199 volumes, having been enriched by the gift of books from the Pharmaceutical Conference. The report of the treasurer showed that the financial position of the association was satisfactory. On the motion of the president, seconded by Mr. T. M. Clague, the reports were adopted. The president delivered an address, and after votes of thanks the following officers were elected to form the executive for the ensuing year:—President, Mr. N. H. Martin; vice-president, Mr. John Harrison; secretary, Mr. Charles B. Ford; treasurer, Mr. Thomas Rheeder; council, Messrs. Bolam, Dunn, Stuart, Usher, Watson, Wright, Foggan, Sarsfield, Noble, and Brayshay.

NOTTINGHAM.

INQUEST ON A CHEMIST.—On November 1 the deputy borough coroner and a jury investigated the circumstances attending the death of Charles Pride, aged 45, chemist, of 72 Woodborough Road. Mrs. Phoebe Pride said that her husband had always enjoyed good health, and had not been attended by any doctor. About half-past nine on the previous evening he went out with the intention of going to Peas Hill Road, but she had since found that he had not been there. About 10 o'clock she heard groans in an out-house in the back-yard, and on going to the spot she found her husband lying on the ground. To the best of her belief he was conscious, and he muttered some words, which, however, were unintelligible. With assistance she got him into the house, and Dr. Dunn was sent for. His breathing was very heavy, and it gradually grew weaker until he expired. Dr. Dunn said when he was called in he found deceased unconscious, and his breathing was very heavy and laboured. He died about five minutes after witness arrived. A phial found near deceased had contained some kind of oil, which was of a harmless nature, and did not appear to have been used for some time past. There was no sign of the deceased having taken poison, and everything pointed to death from apoplexy. The jury returned a verdict in accordance with the medical evidence.

PLYMOUTH.

INEFFECTUAL TREATMENT.—An inquest was held at the St. George's Hall, Stonehouse, on Tuesday, by Mr. R. Rodd, junr., deputy coroner, on the body of Alfred Comerford, the six-year-old child of Staff-Sergeant Comerford, who died rather suddenly on Monday morning. Deceased complained of being ill on Saturday. His mother gave him some "composition essence," which he vomited. As the child did not get better by Sunday his father consulted Mr. Williams, chemist, Union Street, who stated that deceased was suffering from a bilious attack, and prescribed a grey powder. But the child got worse, and by the time Mr. Waterfield, surgeon, was called he had died. Mr. Waterfield attributed death to a convulsion, brought on by exhaustion, through the congested lung and diarrhoea. A verdict was returned accordingly.

SHEFFIELD.

SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.—Sheffield will again be to the front in trade politics on Wednesday next, November 13, when the case of "Unqualified assistants selling poison" will be considered in all its bearings. A good discussion is expected.

AN OVER-DOSE OF "INFANTS' MIXTURE."—On November 3 a child named Harry Squires, in the charge of its

grandmother, was admitted into the Sheffield infirmary suffering from an over-dose of "infants' mixture." The child had been ill, and the mixture was administered by its grandmother in mistake for medicine which was in a similar bottle. When the mistake was discovered the child was taken to the infirmary, and is now apparently progressing towards recovery.

IRELAND.

It is proposed to establish a new branch dispensary at Newtowncrommelin.

THE Cork Board of Guardians have completed a new disinfecting chamber, which is stated to be giving much satisfaction.

FOR stealing a valuable diamond Masonic ornament, the property of Sir Henry Cochrane, aerated-water manufacturer, Dublin, a woman named McDonnell has been sentenced to six weeks' imprisonment.

SIR JOHN THOMAS BANKS, K.C.B., Regius Professor of Medicine in the Dublin University, was last week entertained to dinner by over one hundred members of the Irish medical and compounding professions.

MR. J. BURNETT, L.P.S.I., lately with Mr. John Evans, State apothecary, Kingston, has been appointed manager of the compounding department of Messrs. Hamilton, Long & Co., *vice* Dr. Pryor, L.A.H., resigned.

By the will of Lady Combermore, a sum of 28,000/. has been bequeathed to the funds of the North Infirmary, Cork, upon the staff of which the deceased lady's father, Dr. Gibbing, was for many years actively engaged.

CONSPICUOUS among the many city improvements are Messrs. Graham's apothecaries' establishment, Westmoreland Street, and Conyngham's Medical Hall, Upper Baggot Street, Dublin, both these houses having recently gone through extensive external alterations.

FROM an interesting return just issued by the Cookstown Board of Guardians it is found that the average annual expenditure in the district for drugs and medicines amounts to close upon 220/. This explains the keen competition among the contracting druggists.

SIR JAMES HASLETT ON CONFLAGRATIONS.—Speaking a couple of days ago on the subject of city improvements, Alderman Sir James Haslett, chemist and druggist, Belfast, characterised the advent of a fire as "a merciful interposition of Providence," which enabled the corporation to exercise their powers in improving the street frontage. Doubtless the insurance companies are of a different opinion.

SERIOUS CHARGE AGAINST A DISPENSARY OFFICER.—The Banbridge poor-law guardians had before them at their meeting last week papers from the Local Government Board in reference to alleged neglect of duty by the dispensary officer at Crossgar, the question being whether that gentleman should be allowed to retain his position. The official minute recommended an extraordinary meeting of the committee to decide the point, and to lay their opinions before the Board.

IN accordance with a resolution recently passed by the Dublin trading community condemning unfair and cutting competition by institutions supported by public funds, the pharmaceutical profession, represented by Mr. James E. Brunner, M.A. (Anderson & Adams), was last week *en évidence* in bringing the grievance before the civic authorities, who after investigating the case promised that when the annual vote came under consideration the interests of the merchants would be henceforth protected.

CONSIDERABLE friction is being experienced, says the dispensary medical officer of one of the Dublin hospitals, between the faculty and some of the city chemists on account of the increasing number of outside recipients of medicine, &c., at one or two well-known institutions, the authorities of which permit well-dressed individuals to get physic at a nominal charge of a few pence. This is properly objected to by the craft, who lose considerably by the practice, and an effort to abolish the system is likely to be the outcome of the protests.

CHEMISTS' AND DRUGGISTS' ASSOCIATION OF IRELAND: INTERVIEW WITH THE SOLICITOR-GENERAL.—In accordance with arrangements, the Dublin and Belfast branches of the Chemists' and Druggists' Association waited, on Monday last, November 4, upon the Right Hon. D. H. Madden, M.P., Solicitor-General for Ireland. The deputation, which attended at noon at the Incorporated Law Society's Rooms, Four Courts, Dublin, was composed of the following gentlemen:—Mr. S. P. Boyd, M.A. (vice-president); Mr. John Brooks, Lower Baggot Street; Mr. Charles Smith (Alexander & Co.); Mr. Joseph J. Dowling (hon. secretary), 46 Mary Street; representing Dublin branch. Sir James Haslett, J.P., Belfast; Mr. J. Shaw, Belfast; Mr. J. W. Rankin (hon. secretary), Belfast; representing Northern branch. Owing to exceptional circumstances Mr. W. J. McNeight, president of the Dublin branch, was unavoidably absent. Mr. Boyd introduced the deputation, and Sir James Haslett acted as spokesman. He said he supposed the right hon. gentleman was more or less familiar with the subject of discussion. Mr. Madden, however, pleasantly rejoined that in all legal matters it was generally safer to plead ignorance than to take anything as being understood, hence he would take the matter *ab initio*. Sir James then proceeded to lay before him the chief points of the case, and submitted that the trade in drugs and poisons throughout Ireland is carried on by two classes of persons—licensed apothecaries, qualified from the Apothecaries' Hall, under Act 31 George III., and by chemists and druggists scattered over the country, whose business has been transacted with safety and satisfaction to the community. In 1875 an Act of Parliament was passed extending the number of licentiates for the purpose of empowering them to fill up medical prescriptions and to sell poisons, and shadowed, if not the necessity, at least the desirability of establishing a second grade of general traders, to be classified as chemists and druggists. The Pharmaceutical Council did not, however, take up the suggestion contained in the Act, and hence a second grade was not established. Matters went on in their usual course until 1884, when the Council again took up the case, but beyond preparing a synopsis of the proposed measure no further action resulted. For four years longer the lull continued, business during the interim being carried on as usual; but in 1888 a measure was brought before the House of Lords, referred to a select committee, and subsequently brought on to the House of Commons, where it was so unanimously rejected that not one member could be found to propose its adoption. Amendments were afterwards brought forward by different Members of Parliament embracing the requirements of the traders throughout the country; and so strong was the feeling on the subject that the pharmaceutical party felt it impossible to do aught but yield to public opinion, and, through the agency of their President, came to an agreement with the chemists and druggists to adopt the provisions of the amendments, and the Bill, being thus revised, would certainly have become law but for the session being almost ended, owing to which the amended Bill was slaughtered with a number of other innocents. Subsequently the Pharmaceutical Council repudiated the agreement and concessions made by their President, resulting in the resignation from the Council of that gentleman and some others. Every vendor of poisons is subject to the Sale of Poisons Act, neglect of the requirements of the Act subjecting vendors to fines. All, therefore, that could be claimed against the chemists was that they were not an educated body; but even if such were true, it was never proved that public safety was jeopardised by them, an assertion which could not be said of qualified pharmacists, among whose ranks mistakes and accidents were not infrequent. As the law at present exists, pharmaceutical chemists have the right of filling medical prescriptions, a privilege not questioned by chemists and druggists; but what they do dispute is the endeavour by the Pharmaceutical Society to establish a monopoly by which no person other than a licentiate of their body or of the Apothecaries' Hall shall be empowered to sell poisons of the simplest description, thereby subjecting the public to considerable inconvenience, and restricting the present competition to a few monopolists. In such a case cattle and other medicines could not be obtained except through apothecaries whose houses would, especially in the outlying provincial districts, be few and far between. There are now in Ireland, in round numbers,

three hundred pharmaceutical chemists, and if the three chief centres, Dublin, Belfast, and Cork, be subtracted, no more than fifty will remain keeping open shop, while against this there are, as certified, no fewer than two thousand chemists and druggists in the country, and the mere handful of pharmacists would, if they could, exclude all these from selling poisons. Were such an arrangement to exist it would simply mean one pharmacy for about every ten towns in Ireland, the public inconvenience of which would go without saying.

After Sir James Haslett had concluded his remarks, the Solicitor-General paid him a very flattering compliment on the lucid way in which he had laid the case before him, and asked several questions which were satisfactorily answered. Messrs. Boyd and Brooks, in the course of some further statements, thanked Mr. Madden for his close attention and courtesy. The Solicitor-General expressed himself pleased at the logical deductions of the deputation, and whilst remarking that as a public official he could make no promises, he would be glad to receive an exhaustive statement, which would have his best attention.

At the termination of the interview a private consultation was held by the deputation, and some details of future action decided upon.

Much pleasure was felt at the result of the reception, which was considered an important point scored. An adjournment was then made to the Gresham Hotel, where a luncheon was served.

SCOTLAND.

DUNDEE.

A CLASS for Minor students, in connection with the Assistants' Association, was commenced on Monday evening. It meets three nights a week, and will be under the supervision of the secretary.

DR. DAVID N. GREIG, son of Dr. Greig, Tay Street, has commenced practice at 86 Nethergate. The young doctor's grandfather at one time had a drug business in "The Pillars," which is still carried on by P. Sandeman & Co.

EX-BAILIE DOIG, a well-known local chemist, unsuccessfully contested the sixth ward, his opponent, Mr. Robert Keith, being elected councillor by the narrow majority of 49 votes. Mr. Doig, who represented the fourth ward for six years, but retired last year, was prevailed upon at the last moment to oppose Mr. Keith.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—The fifth meeting was held on Thursday, October 31, Mr. John Forsyth, president, in the chair. There was a very large attendance, due, doubtless, to the fact that it was the first of the "musical and social evenings." The arrangements for the evening were in the hands of Messrs. Alex. Adam and D. Johnstone, and these gentlemen provided an excellent programme, which was a perfect revelation of the amount of entertaining talent which has been lying latent for so long. The evening was a great success. The conversation committee have arranged for that function to come off on December 18. A ball will follow it. At the next meeting of the association (November 14) a paper on "Putrefaction and Fermentation" will be read by Mr. Frank W. Young, F.R.S.E., an old chemist's assistant and "Corner for Students" prizeman, who is lecturer on chemistry at the Technical Institute.

EDINBURGH.

THE POSTAL DIFFICULTY reported by Messrs. Thomas Symington & Co. has been settled. In August a city newspaper forwarded to them forty-three replies to an advertisement they had inserted. The packet was intended for the parcels post, but it had only two stamps on it, weighed 12 oz., and was posted among the letters. It was opened in the post-office, and each letter therein was surcharged, the amount claimed and paid being 5s. 10d. In reply to an application, the postal authorities have since decided to only charge double the deficient letter-postage (5d.), and they have therefore returned to Messrs. Symington & Co. 5s. 5d.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—The twelfth session of this association had a good

beginning last Wednesday, October 30. Mr. Donald McEwan, on behalf of the prize committee, reported that the following awards had been made as the result of the recent competition:—First prize (value 2*l.* 2*s.*) to Mr. George Shaw, 17 North Bridge, with 89 per cent. of marks. The second and third prizes were equally divided between Mr. R. E. Macdonald, 41 Argyle Place, and Mr. W. Smith, 119 George Street, who had each obtained 77.5 per cent. of marks. A special prize, presented by Mr. J. Findlay, was awarded to Mr. A. Cruikshank, 56 Newington Road, who obtained 73 per cent. of marks. Mr. William Gilmour, F.R.S.E., presented the prizes, and this over Mr. A. R. Bennet, president of the association, delivered an inaugural address. He took as his topic the history of the association. It was, he said, the outcome of a suggestion made at a reunion of the chemists' assistants of the city in the spring of 1878. A good many years previous to this there was in existence an association known as the "Wilson Association," and so called in honour of the late Dr. George Wilson, who was a warm friend of the pharmaceutical student. The proceedings of this association do not appear to have been published, and after an existence of about ten years it ultimately became defunct. The present association commenced with a membership of forty-seven, and has gradually gone on increasing, and last session it had over ninety members on the roll. Mr. Bennet glanced at the difficulties which the association had had to encounter, then referred to its prize schemes, which since 1881 have been immensely advantageous to the younger members, and have been the means of encouraging many who otherwise might never have been heard of. The botanical excursions were also alluded to, and then Mr. Bennet gave a racy account of the new remedies which have been introduced during the existence of the association, as well as the advances which have been made in pharmaceutical science generally. Finally, he outlined the advantages which the Association presents to its members. The address was well received, and produced a number of speeches, Messrs. W. Gilmour, D. B. Dott, and Thomas Thompson being amongst those who gave the members advice and cheering. Afterwards Mr. W. B. Dougall was elected secretary, Mr. J. Findlay assistant-secretary, and Mr. A. J. Clark member of committee, and the chairman intimated that the next meeting on November 13 would be an open one, under the charge of Mr. George Coull, B.Sc.

GLASGOW.

BUSINESS CHANGES.—Mr. George Muir, retail department staff, Glasgow Apothecaries' Company, has purchased the business of Mr. Smith—formerly Tocher's—Helensburgh; and Mr. William Muir, also from the Glasgow Apothecaries' Company, has bought a shop at Campsie.

THE SECRET OF LONGEVITY.—Mrs. Newton, the "oldest inhabitant" of the village of Auchinloch, a few miles out of Glasgow, who is now in her 105th year, and still enjoys fair health, ascribes her persistent vigour and vitality to her avoidance of all "doctor's drugs," with which she says people nowadays rot their insides. She never had medicine out of a doctor's bottle in her inside, and has no intention of swallowing any of their stuff on any consideration whatever.

General and Provincial News.

THERE was a meeting of the Chemists' Ball Committee on Monday night for arranging the preliminaries of the next ball, which is to be held at the Portman Rooms on January 12. Mr. Francis (Hearon, Squire & Francis) again acts as honorary secretary.

THE annual conversazione of the Chemists' Assistants Association will be held on Thursday, November 14, at the Portman Rooms, Baker Street, at 8 P.M. The concert will commence at 8.30 P.M. Next week's meeting of the Association will be devoted to the reading and discussion of short papers by members.

WELDON-PECHINEY PROCESS.—We understand that a start is shortly to be made in this country with this process

for the manufacture of chlorine from magnesium chloride. It is to be tried on a commercial scale at Messrs. Allbright & Wilson's works at Oldbury. It is also stated that arrangements have been made for beginning the process in Germany.

A WHOLESALE WAREHOUSE FLOODED.—On Friday afternoon, November 1, the premises of Messrs. Da Silva & Co., wholesale medicine dealers, 26 Bride Lane, Fleet Street, were flooded through the bursting of a water main in the street. The outburst occurred in front of Messrs. Da Silva's premises, and before it could be checked a large volume of water poured into and inundated their basement, which lies on the lower side of the street.

BRIMSTONE AND TREACLE.—An inquest was held at Lowton last week, inquiring into the death of a boy supposed to have been poisoned by eating brimstone and treacle. The mixture had been given him, in the first instance, for a slight ailment, and the boy had made toffee of the remainder. Dr. Mapei attributed his death as much to the improper food as to the brimstone and treacle, and a verdict of "Death from Natural Causes" was returned by the jury.

THE COUNTY COUNCIL AND ITS CHEMIST.—At the usual weekly meeting of the London County Council, held at the Guildhall on Tuesday, the Main Drainage Committee reported that it was necessary, in connection with the works for the precipitation of the sewage at the Barking outfall, that residences should be erected for the superintendent and the assistant to the chemist, and that a laboratory should be also provided. The architect had prepared plans for these buildings, which had been carefully considered by a sub-committee, and also by the committee, who now recommended "That the plans submitted with this report showing two semi-detached houses at an estimated cost of 700*l.* for the two, and a laboratory at an estimated cost of 500*l.*, be approved, and that the works be carried out subject to the estimate being approved by the Finance Committee." The report was agreed to without discussion.

ALLEGED EXTRACT OF MEAT FROM OLD HORSES.—Messrs. F. W. Berk & Co., agents for the Kemmerich Extract of Beef Company, send us copies of the following letters:—One from Mr. John Colam, secretary of the Society for Prevention of Cruelty to Animals, saying that after investigation, as far as he has been able to ascertain, horses exported from this country are not turned into extract of beef at Antwerp, and there are no factories in Antwerp where extract of beef is prepared; but a large number of old horses are exported from England to Antwerp which are killed and legally sold as horse-beef in shops; and another from the Great Eastern Railway Company's Continental traffic manager to say that they have not, up to the present, carried any horse-flesh between Harwich and Antwerp. They carry a large number of horses to the Continent, but among these there is never a horse in the least diseased; in fact, they positively decline to accept any knacker which is not accompanied by a certificate of health from a veterinary surgeon.

THE SOCIETY OF ARTS arrangements for the ensuing session have just been completed. The session commences on November 20 with an address from the Chairman, the Duke of Abercorn; and before Christmas four lectures will be delivered, amongst them being the following:—November 27, "Scientific and Technical Instruction in Elementary Schools," by Dr. J. H. Gladstone; December 4, "Rabies and its Prevention," by Dr. Armand Ruffer; December 11, "The Paris Exhibition," by H. Trueman Wood, M.A., Secretary to the Society. We notice that after Christmas the following, amongst other lectures, will be delivered:—"Ocean Penny Postage and Cheap Telegraph Communication between England and all Parts of the Empire and America," by Mr. J. Henniker Heaton, M.P.; and "The Records of the India Office," by Mr. Frederick C. Danvers. There are three courses of the Cantor lectures which will be of special interest to chemists, viz.:—"The Electromagnet," by Prof. Silvanus P. Thompson, January 20, 27, February 3, 10; "Some Considerations concerning Colour and Colouring," by Prof. A. H. Church, March 17, 24, 31; and "Sugar, Tea, Coffee, and Cocoa, their Origin, Preparation, and Uses," by Mr. Richard Bannister, of Somerset House, April 28, May 5, 12, 19.

Pharmaceutical Society of Great Britain.

COUNCIL MEETINGS.

THERE was a tendency to slowness at Bloomsbury Square on Wednesday morning—that is, conversation was brisk until President Carteighe's powerful voice gave out the names of aspirants to the honours of the Society—membership, &c., to wit. Incidentally he mentioned that Mr. James Lloyd, of Battersea Road, London, had paid a guinea in order to be restored to the registrar of chemists and druggists. Then

THE FINANCE REPORT CAME ON.

There was little of special interest in this. The builder had been paid 1,000*l.* during last month, and the treasurer had to find the money to pay it by selling out 1,000*l.* of Government stock, which fetched 960*l.* It was proposed to pay another 1,500*l.* during this month if it should be necessary. On the general account, amounts totalling 857*l.* were ordered to be paid, there being 517*l.* in hand to meet this. The benevolent fund account was reported to be in a satisfactory condition, a total of 216*l.* having been received during October. In moving the adoption of this report the President briefly commented upon the principal points in it, explaining that the stock sold was part of the 3,000*l.* agreed at last meeting to be disposed of when necessary. He thought that the benevolent fund receipts were very satisfactory; 181*l.* in subscriptions was good for the flag-end of the year, and it put the balance in such a good position that they would be able at the beginning of the year to pay all the annuitants out of the previous year's receipts. That was rather a difficult thing to do generally, and he could not help congratulating his colleagues and the country members of the Society on the fact, at the same time complimenting the secretary for the personal efforts which he had made to bring up subscriptions. The latter sentiment was heartily endorsed with "hear, hears," and after a few more sentences from Mr. Carteighe the report was adopted.

THE NEXT SUBJECT

was the granting of diplomas to the young men who passed the Major last month. On this matter the President remarked that there was a very considerable increase in the number of Major candidates, and he was sure that in these times of pressure this was a very gratifying thing. (Hear, hear.)

THE BENEVOLENT FUND.

The committee had considered six cases, two of which were deferred for further consideration, and one was "not entertained." Of the fortunate three one received a grant of 10*l.*, and two 5*l.* each. This report was, as usual, taken in committee, and we may say without any flagrant breach of confidence that while the Council was under the shelter of the flag the President asked the members if they had anything to say privately. There was a full response to this from half of those who were round the table (Messrs. Abraham, Evans, Hampson, and Watt did not attend this meeting). Half an hour spent in this manner is a blank to us. It seems that, owing to the discussion at last Council meeting regarding the manner of electing annuitants, and the suggestion to repose this function in the Council itself, there has been

AN AVALANCHE OF DISSENT,

consisting of one letter in the *Pharmaceutical Journal* and one or two in *THE CHEMIST AND DRUGGIST*. A few councillors had received threatening letters from their constituents; hence the alarm, and a set speech from the President when the Council came out of committee, in which he said that he was responsible for what took place at last meeting, so far as it referred to a changed manner of election. The alarm amongst subscribers was entirely due to a misapprehension. A hint had fallen from one of the members that a different method of election was required, and he (Mr. Carteighe) had said that he would be very glad if the suggestion could be adopted; but he had been careful to say that the time had not come for it. He did not even con-

template it, and had specially said that those who were of that way of thinking could best bring about what they wanted by doubling their subscriptions. And so the President continued his explanation, concluding with the remark that those who had threatened to withdraw their support or complained had not read carefully what was said. This over, the report of the Library, Museum, Laboratory, and House Committee was read. It contained nothing startling; nevertheless

A LONG DISCUSSION

was raised upon it. This was initiated by Mr. SCHACHT, who wanted to know if the circulation of books to country members was on the increase. Was the scheme of paying carriage one way successful? The PRESIDENT thought the number of books actually sent out did not increase; but, he added enthusiastically, the scheme was very successful indeed, and the Council had been compelled to duplicate the best books of reference, such as Gmelin's "Chemistry" and Watts's "Dictionary," which were often wanted by provincial investigators. Then Mr. NEWSHOLME started the idea of paying carriage both ways to apprentices. He thought that would encourage them. So did the PRESIDENT, who said the Committee might consider it. Mr. ATKINS suggested that members who had books to spare should send them to local libraries. The Sheffield Society had a good library, and many demands upon it. Mr. SOUTHALL thought apprentices could get all the books they wanted in the local libraries. That was the case in Birmingham. At this point the PRESIDENT, in a pretty lengthy speech, more clearly defined the length he would go with Mr. Newsholme. He would not feel inclined to let students have ordinary text-books carriage paid both ways. These were books which they ought to get themselves, and pay for; and he noted with regret a growing demand for such books on loan, especially in the North. It was the large works of reference which he favoured the loan of.

Mr. SCHACHT then explained his views. He wanted the library to be thoroughly representative of our science, and so well supplied with duplicate sets that country members should not have to suffer disappointment in regard to what they wanted. And so the conversation continued; first one member, then another, showing a remarkable want of knowledge of the rules which the Council have laid down regarding the loan of books. At last Mr. MARTINDALE said that the best way to make the library as useful as possible was for the members to return the books as soon as possible. "Hear, hear," was the general response to this sentiment. So far Mr. Newsholme's idea seemed to have the best of it, and in a short pause it looked as if the matter would end there, but it did not.

THE VICE-PRESIDENT HAS VIEWS ON THE SUBJECT,

and these he gave expression to. A good deal had been said about "Sutton" contracts. He believed that most of those who borrowed had the books carried to them under these contracts, and if the Society paid carriage both ways they would not save chemists anything, but would transfer the Society's money into Sutton's pocket. He objected to that, and objected also on principle to paying carriage both ways. A thing that was worth having was worth paying for, and he saw no reason for the change. Messrs. Martin, Hills, Gostling, and Richardson supported this view, and Mr. Newsholme replied, saying that he did not object to members paying—it was the poor apprentices whom he championed. Ultimately the matter was left in the hands of the committee.

"UN VÉRITABLE ENCHANTEMENT."

This is the expression which Professor Planchon, the Hanbury medallist, has used in a letter to the President, as his opinion of his recent visit to London, including, added Mr. Carteighe, the two Channel voyages. Since Professor Planchon has returned to Paris he has sent presents to all the members of the Council, and he supplemented this by stating in the letter referred to how extremely grateful he was to the members for the cordial manner in which they had received him. All this came out through the President, who formally mentioned the matter to the Council.

THE SECRETARY FOR EAST MARYLEBONE.

Mr. Martindale, having become a member of the Council, resigned the less dignity, and now proposed that Mr. Richard Thomas, 13 Upper Baker Street, should be appointed his successor. "I have been looking around," said Mr. Martindale, "to see if I could get a likely Elisha (laughter) upon whom to throw my mantle, and I think that in Mr. Thomas, who is a young pharmaceutical chemist, you will have a man who will do the Society good service." The mantle fell accordingly, and metaphorically, upon the Baker Street Elisha's shoulders.

AN APPLICATION FOR BOOKS

from the Dundee Chemists' Assistants' and Apprentices' Association was, after a short conversation, referred to committee for further inquiries. The secretary reported the results of the examinations held last month.

"When is the modified examination to cease?" asked Mr. Richardson. "We have no power to stop it, unfortunately," replied the President. "It will cease," added Mr. Atkins philosophically, "when the men cease."

THE RAILWAY RATES COMMISSION.

The President reported that he had attended a meeting of the Commission, but more as a private individual than as President. He had had conversations with counsel and the representatives of the railway companies, the results of which, briefly stated, go to show that the railway companies are making every endeavour to meet the demands of the objectors. He instanced one or two points that he had spoken about particularly—empties for example. He pointed out to the manager of one company how hard the new rates for empties would be on chemists and druggists. "Bless you," was the reply, "it is not these that trouble us. What we are aiming at is large empties—pianoforte cases and other huge things like that—which require a whole waggon to themselves."

A longish conversation ensued, during which the usual comments upon the heavy railway charges were made; and in the course of this the President said that the counsel for the railways maintained that the Commission was formed to consider the terminals, not the rates. In his opinion, there was that in the Act which supported this view, and nothing could be done to oppose the rates until they were actually charged. When there were complaints of that kind to be made, there was a special commission before which they could be heard. He also urged that it was only reasonable that the companies should have *maxima*. Further than these items the discussion brought out nothing new, and this brought the public work of the day to an end. The Council afterwards sat in private.

SOCIETY OF CHEMICAL INDUSTRY.

THE first meeting of the London Section, session 1889-90, was held at the Chemical Society's rooms on Monday evening. There was a good attendance, and Mr. David Howard, chairman of the Section, presided. At the outset Mr. Howard referred to the great success which the annual meeting had been, expressing in warm terms his appreciation of Mr. Ludwig Mond's unbounded hospitality as President, and thanking country members for coming up in so large numbers. He also referred to the great kindness which the Society had experienced at the hands of Sir Henry Doulton, and said that such meetings for mutual intercourse were attended with the greatest amount of good. He then called upon Mr. C. Napier Hake to read his paper on

A CALIFORNIAN BORAX LAKE.

The meeting had been prepared for this by the exhibition of diagrammatic maps and illustrations of the region which Mr. Hake visited three years ago. The borax region of California lies between the Sierra Nevada mountain range on the west and the Rocky Mountains on the east. That, of course, is a pretty large stretch of country, but so is that portion of it which is boraxiferous, for the latter part extends to no less than 2,000 square miles, all of which is more

or less prolific in borax. In this great borax basin there are mountains, valleys, and rivers. None of the latter reach the sea, as they either empty into some inland salt lake or are absorbed by the sandy ground. What soil there is of an alkaline nature, abounding in sodium carbonate, chloride and sulphate, borax, magnesium borate and sulphate, and other salts in less amount than these, the chief constituents. Naturally, therefore, the lakes are alkaline, so is the soil, and extensive patches of the latter yield a hard efflorescence which is sufficiently valuable to be worked up in borax manufacture. The external aspect of the country is utterly bleak and desolate; the soil is hopelessly sterile; water for drinking is only to be got in the cañons, and these are miles distant from where the borax is to be got in profitable quantities. Such, then, are the general features of the country which Mr. Hake described. The lake, which was his principal topic, is situated 450 miles south-east of San Francisco; it is 1,700 feet above sea-level, and its extent is about 12 miles by 8 miles. Upon the surface there is formed an incrustation varying from a few inches to several feet in thickness. This consists largely of borax. Beneath is a black mud, composed of sulphide of iron and saline matter charged with sulphuretted hydrogen. Ammonia gas emanates from it. The incrustation may be said to be made up of three things, although others are present: these are borax, sodium carbonate, and sodium chloride. So far no commercial value is attached to the carbonate and chloride, but they are of interest as showing that a sort of natural ammonia-soda process exists in the region. Beneath the mud there is in abundance ammonia, carbonic acid, and sodium chloride. These reacting produce the sodium carbonate—at least, that is the theory which Mr. Hake promulgated. There is a patch in the lake in which borax crystals are deposited along with the other salts which have been named. The borax is almost chemically pure, and the lake is capable of yielding 700 tons of it a year, working during the dry season only. It will be understood that the recurrent rains and heat are the factors which chiefly determine the growth of these deposits on the "face of the earth." This is strikingly illustrated in the dry efflorescence which yields the most of the borax obtained from this region. This efflorescence is a borax mixture about an inch in thickness, which is removed from the surface with spades, carted to the factory, and there treated with water and crystallised. The efflorescence grows slowly. If the ground is cleared one year that part is not again disturbed for three years, and by that time it has grown about an inch thick. It is interesting to note the composition of the efflorescence at various periods, as shown by the following figures:—

	Six Months	Two Years	Three Years	Four Years
Borax	14.2	12.9	11.8	10.9
Sodium carbonate	5.2	5.0	8.1	8.1
Sodium sulphate	1.7	6.7	10.6	10.0
Sodium chloride	10.9	20.0	11.1	11.3
Sand	58.0	55.4	58.4	59.3
—	100.0	100.0	100.0	100.0

When taken to the factory the efflorescence is thrown into boiling-vats containing the mother liquor from previous operations. The solution is allowed to settle, drawn off, and set aside to crystallise. The product comes into the market as "concentrations"—an impure borax, slightly brown, and containing organic matter. A single recrystallisation thoroughly purifies it. The factory can turn out 100 tons per month, working with fifty men and sixty-five animals. The men are "heathen Chinese." The borax is sent to the nearest shipping-port, a distance of seventy-five miles, by what is known as the desert schooner, which is a heavy waggon drawn by twenty-five mules and capable of carrying 10 tons. There are resting-stations on the way, and water-supply for men and beast is carried by conduit all the road. The journey takes five days each way. Although borax is widely distributed in California there are only three places which can be profitably worked, and these yield from 1,500 to 2,000 tons of borax per year, the whole of which is consumed by the United States. Mr. Hake told the meeting all

about the difficulties which have to be overcome before even this is garnered. Transport is the costly part of the business, and until that has been dealt with in a satisfactory way there is little chance of a greater reduction in price than we have experienced.

Mr. Howard opened the discussion by a concise historical statement regarding the borax trade. He remembered the time when borax was 90s. a cwt.—he wished it were that now (laughter)—and a rare thing, but all that had been changed, and the article had become one of the most common detergents and most valuable disinfectants.

Mr. Robottam followed with an exceedingly graphic account of his travels in California in search of borax. He really is the discoverer of it there, knows as much about borax as anybody perhaps, and is, above all, excessively humorous in his talk. So the meeting had a treat for ten minutes, while he laid off his reminiscences in his humorous way, and told them of his endeavours to popularise borax. He did not agree with Mr. Howard about the price—the cheaper, he said, we make an article the better it is for mankind, and borax is such a good thing—the best in the world, from his point of view—that all we have to do is to let people know of it and get it used. Mr. Moss joined in the discussion. He wanted to know if Mr. Hake had tried to find out the source of the borax—where and how the boron and the other elements combined? Then what was the mud? Did it contain bacteria? It seemed so from the fact that ammonia was present. To these questions Mr. Hake could not give a satisfactory reply. The chairman suggested that the hydrated calcium borate in the San Diego Mountains might account for it, but Mr. A. H. Allen reminded the meeting that there is a theory that borax exists originally as boron nitride, which is decomposed at a high temperature and in presence of steam, ammonia and boric acid being produced. This did away with the necessity for associating organic matter with its production. He asked Mr. Hake how he had estimated the borax in presence of the other sodium salts, but Mr. Hake had forgotten. It was a titration method, with a special indicator, as far as he could recollect.

NITRIC ACID DOES NOT DISSOLVE COPPER.

This was the outcome of an investigation regarding which a short note by Mr. Beeley was read by Mr. Watson Smith. The communication in its complete form has been read to the Royal Society. It shows that ordinary nitric acid, 28 per cent., does dissolve absolutely pure copper, but that somewhat slowly. If, however, the acid is freed from nitrous acid by suitable means copper is not dissolved by it if the copper and acid are kept in motion. Nitric acid containing as little nitrous acid as 1 in 3,000,000 does have a slight effect upon copper; but place a little urea in the mixture, and chemical action entirely ceases. It is clear, then, that when copper is dissolved in "nitric acid" the first thing done is the formation of cupric nitrite by the action of nitrous acid on the copper; this is decomposed by the nitric acid, cupric nitrate being formed, and nitrous acid set free—and so the action goes on. Copper is therefore analogous to silver, which Russell has shown to be acted upon only by nitric acid which contains nitrous acid, and Mr. Beeley's observations with mercury show that it must be placed in the same category.

This note elicited a rather interesting statement from Mr. Cross, who has had similar experience in regard to the action of nitric acid on lignified tissue. In ordinary circumstances this action is very marked, but if a little urea is added the action is suspended, owing, he believed, to the change of the urea to its isomer cyanic acid.

GERMAN DRUGGISTS AND ENGLISH PHARMACISTS.

Mr. Thomas Christy communicated the substance of a paper which he also read before the Chemical Section of the Chamber of Commerce on Thursday. In it he described the educational routine at the Druggists' Academy of Brunswick, told the meeting what the fees are, and showed an excellent collection of materia medica, botanical and chemical specimens formed by the principal student of last year, as well as his notebooks. He pointed out that the students visited factories (a quinine factory amongst them) as part of their education, and contrasted this and other points about the German method with those that obtain in this country, apparently to the disadvantage of the latter. In the course

of the discussion on this paper Mr. Watson Smith said that, as a teacher of technical chemistry at Manchester, he had no difficulty in arranging visits of his pupils to the chemical works in the district, and the managers even explained the processes. Dr. Alder Wright also testified to the liberality of English manufacturers in that respect, and, speaking of technical education, remarked, to the evident delight of the meeting, that it would never be satisfactory until teachers themselves had the requisite practical training in technical matters. Mr. MacEwan pointed out that the druggists of Germany were the equivalents of herbalists in this country, and were a lower branch than pharmacists. He maintained that all that Mr. Christy had praised in regard to the Brunswick School had been done in this country for forty years or more. He did not think that there was an urgent need for students of pharmacy to visit pharmaceutical factories, because the tendency of Pharmacopœias was to leave out processes and simply describe the characters and tests of pure chemicals, so that the duty of the pharmacist was not so much to make what he could buy cheaper and better, but to assure himself that the medicines he used were pure. Mr. Moss supported the previous speaker in regard to the existence of efficient pharmaceutical schools in this country. The Pharmaceutical Society, he said, had established one of the first chemical laboratories ever founded in this country. They were the pioneers in that line, and had maintained a high standard throughout. Moreover, the museum of the Society was second to none—it was really the finest in the world, and the library also was most excellent. He sympathised with much that Mr. Christy had said, but, as regards visits to laboratories, he did not think that there was a wholesale druggist's laboratory in the kingdom where students would learn much on a visit—the proprietors would take care that they did not. (Laughter.) Mr. Tyrer maintained that the practice of examining notebooks had been commenced in this country by Hoffmann, and he knew that it had been kept up, for the system was carried out in the Finsbury Technical Institute, which he had casually visited the other day, and he could speak in the highest terms of the care and attention which Professor Meldola bestowed upon his work.

This practically completed the discussion, and the meeting adjourned.

A NEW ANTISEPTIC.

UNDER this title a paper was read before the Medical Society of London, on November 4, by Sir Joseph Lister. The antiseptic is the double cyanide of mercury and zinc, and is prepared as follows:—

A soluble double cyanide of mercury and potassium is dissolved, and to it a soluble salt of zinc is added; the precipitate formed is the double cyanide, which should be well washed with water to free it from any soluble cyanides, as they cause irritation and suppuration if placed on a wound in the shape of gauze.

One in 2,000 of double cyanide keeps blood serum and corpuscles from putrefaction, but if the wound has developed bacteria a much stronger solution or powder or gauze must be used. In other words, the double cyanide has a strong inhibitory but a weak germicidal power. Gauze is prepared in the following way:—The double cyanide is triturated with starch, and water is added to this, the result being a somewhat leather-like mass. The water is strained off, and to the mixture of double cyanide and starch sulphate of potassium is added. This enables the mixture to be easily powdered, and, when it is dry, it is a fine white powder. In order to fix this powder on gauze 3 per cent. or 5 per cent. of it is suspended in a 1-in-4,000 solution of mercuric chloride, when, by the agency of the starch, it sticks so firmly that it cannot be washed off except with difficulty.

Sir Joseph Lister said that the dressings should be used moist, and he had a little contrivance which he employed to show the surgeons present how they might prepare the gauze themselves, as he had made it a point that the gauze should be made as required. The exact composition of the double cyanide is uncertain, and is being investigated in the Pharmaceutical Research Laboratory.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

COLLEGE PRIZES AND COMMENCEMENT.—The yearly distribution of prizes to students will take place on November 9, in the Salle des Actes of the Paris College of Pharmacy. Since Monday, the formal opening day of the winter session, crowds of young men have begun to throng the halls so long deserted. It may be an optical delusion, but the class appear taller and physically finer than usual. Perhaps it is an effect of the new military law.

COLLEGES OF PHARMACY APPOINTMENTS.—Director G. Planchon has been appointed director of the Paris superior school of pharmacy for another three years' term, from October 31; M. Courchet, pharmacy *agrégé*, professor of natural history of medicaments and botany at the Montpellier superior school; M. Held, pharmacy *agrégé*, professor of pharmacy at the Nancy superior school; and M. Thouvenin, pharmacist of the superior class, professor of pharmacy and materia medica at the Besançon school of medicine and pharmacy.

DR. RICORD has bequeathed 10,000f. to the Academy of Medicine, the income to be used for a biennial prize under any conditions the Academy may think proper; 5,000f. to the Surgical Society for a biennial prize on the same terms; 10,000f. to the French Medical Benevolent Association; and to the Hôpital du Midi his library, as a token of gratitude. All bequests are to be free of all tax. A petition is circulating among members of the medical profession to pray the proper authorities that the Midi, where he practised and taught for twenty-nine years, be henceforth known as "Hôpital Ricord."

THE CUSTOMARY DECORATIONS have been distributed in consequence of the Exposition just ended. Over four hundred names were gazetted last week in the *Journal Officiel*. As usual sculptors and painters get the lion's share, and common report has it that politics are not foreign to some preferments. Yet scientists and chemists have not been overlooked altogether. Among them the following may be mentioned:—M. Faye, of the Academy of Sciences, has been made a grand officer of the Legion of Honour; M. Mascart and Dr. Verneuil, of the same society, commanders; MM. Cailletet and Dehétrain, of the Academy of Sciences, Leon Chiris, of Algeria, Henri Menier, formerly a druggist, Muntz, the chemist, and Raoul, a navy pharmacist, have been made officers; and, lastly, the knighthood of the Legion of Honour has been conferred on the following:—MM. Goron, formerly a pharmacist and now Chief of Police; Alvergniat, optical instruments; Rosenstiehl, of the Poirier-Dalsace laboratories; Simon Suillot, chemical manufacturer; Tanret, pharmacist and chemist; and Amédée Vée, manufacturing pharmacist. Decorations granted to foreigners do not appear in the *Officiel*.

DINNER GIVEN BY MR. S. M. BURROUGHS.—On Saturday, November 2, the senior partner of Burroughs, Wellcome & Co. entertained a party of pharmaceutical friends to dinner at Delmonico's new restaurant, Boulevard des Capucines, Paris, "in remembrance of pleasant days spent at the Paris Exhibition, 1889." The company numbered over thirty, and included Mr. T. P. Hogg and Mr. Swann, English chemists in Paris; Mr. Gosnell; Mr. Acard; Dr. Hogg; Mr. Julius Wyeth, of Philadelphia; Mr. Schobert, representing Messrs. A. & F. Pears; Dr. Lutand, editor of *Le Journal de Médecine*; Dr. Jennings; Mr. C. E. Lord, of THE CHEMIST AND DRUGGIST; Mr. Seymour Wade, &c. Mr. Wellcome was expected, but did not arrive in time, and Mr. Backhouse (Roberts & Co., English chemists, Paris) would have been present, but had been obliged to leave for London. The famous Hungarian band from the Exhibition was in attendance in an ante-room, and gave abundant pleasure by their high-class music, their repertory including selections from Sullivan's "Iolanthe" and the weird Hungarian gipsy music. The dinner was served in excellent style, and was followed by some interesting speeches. After the usual loyal toasts Mr. Burroughs proposed the "French Medical Profession," expressing his admiration for the skill and knowledge possessed by its members. Dr. Lutand, speaking in fluent English, returned thanks, and commented on the energy and enterprise shown by his host in furthering

the cause of pharmacy, both commercially and scientifically. Dr. Jennings (editor of the *Hygiene of Cycling*) also spoke of Mr. Burroughs as an adept in the pastime which he in some degree represented. Mr. Swann, in replying to the toast of "English Pharmacy in Paris," said his friend Mr. Hogg and himself had been connected with pharmacy in Paris for upwards of forty years. Speaking for himself, he had from the first appreciated the scientific skill and artistic manner of presenting goods which the firm of Burroughs, Wellcome & Co. had always shown. Mr. T. P. Hogg spoke on the same lines, and said he hoped to see the firm go on progressing as it had done during the past decade. They always "lead the van," whether as regards improvements in introducing new remedies or if only by their way of presenting the old ones. Dr. Hogg, speaking both as a medical man and a chemist, joined with the two speakers who had preceded him in congratulating Mr. Burroughs. The firm had done much for doctors and chemists. They, he thought, had perhaps done something for Burroughs, Wellcome & Co. in return. The gentlemen present connected with the Exhibition were toasted by Mr. W. Harrison. Mr. Tuck, of the American Commission, and Mr. Seymour Wade, of the British Commission, suitably responded. Messrs. Weller and Fry spoke as representatives of the firm at the Exhibition, and in conclusion Mr. Burroughs gave "The Pharmaceutical Press," and particularly mentioned "the pharmacists' best friend," THE CHEMIST AND DRUGGIST. Mr. Lord, the Paris representative of that journal, acknowledged the honour, and that brought the speaking to a close. A dance followed, the Hon. W. F. Cody (Buffalo Bill) and his daughter appearing among the late guests.

PARIS SOCIETY OF PHARMACY.

At the regular monthly meeting held on November 6, and called to order by President Bouchardat, Professor Prunier presented a preliminary essay by M. Varet, a Paris pharmacist, on phosphoglyceric acid and its combinations with soda and lime. After a short discussion it was decided not to print in full the paper in the Proceedings, but merely mention it in the minutes. Professor Prunier next spoke of his own investigations on the products resulting from the

ACTION OF SULPHIDES ON CHLORAL AND CHLOROFORM.

The subject is one which was touched by the late Professor Baudrimont, without probing the matter to the bottom. He took advantage of some of the coloured reactions observed to propose chloral as a convenient test for distinguishing simple sulphides from sulphydrates. On repeating the experiments under critical conditions M. Prunier found the test to be a good one, provided some care be taken in applying it. Now as regards the results of the sulphides' action, the products and reactions are most complex. And, what is worse, their analysis presents almost inextricable difficulties. Some of those sulphur combinations will hold as much as 40 per cent. of sulphur, either in the shape of sulphines, carbon sulphides, or the like, and they will pass unaltered through the best oxidising contrivances. Yet with potassium permanganate, powdered and in large excess, Professor Prunier succeeded in obtaining thorough combustion, but, after all, boiling with sulphuric acid was necessary for final estimation. Professor Bouchardat agreed that organic sulphur combinations are most rebellious to chemical analysis. Once in his laboratory they had volatile oils and natural resins known to contain sulphur, and although as much as 4 per cent. of sulphur was certain to be there, it was with the utmost difficulty they managed to separate and estimate it. Carius's process, lauded by many, was found useless on this and other occasions. His conclusion was that for organic sulphur estimation the process has to be changed and adapted for each individual case.

M. Léger reverted to the mixtures of

CAMPHOR WITH SALOL, NAPHTHOL, &c.,

which at a former meeting he thought there was sufficient grounds to consider simple solutions and not combinations. Since then, upon further experimenting, he had come to a different conclusion, and was convinced that they are combinations, not very stable by any means, but certainly combinations. The most conclusive proofs were furnished by

salol and camphor. On mixing one equivalent of each solid a liquid is obtained, which by cooling on ice partly crystallises. As soon as crystallisation begins the thermometer rises, and remains stationary while it lasts, which is a sort of proof in itself. The remaining liquor being several times subjected to similar crystallisation, and the various portions being examined with the polarimeter to estimate the camphor, he thought the combination to consist of six equivalents of salol with seven of camphor. The liquor, he found, will dissolve as much as 25 per cent. of salol, but only 2 per cent. of camphor. Naphthol or resorcin with camphor, although somewhat similar in their behaviour, will not afford such sharp distinctions as salol. The subject is one eminently pharmaceutical, as the compounds are often used and prescribed.

Professor Bouchardat, while agreeing with M. Léger that the liquor is a combination, although very unstable and liable to hold in solution one or the other of the components in excess, thought the polarimetric test to be exceedingly treacherous as a means of chemical analysis. It is so capricious, so erratic for trifling reasons, that unless every step almost has been thoroughly explored there is no knowing where it may lead the experimenter. Perhaps it were better to try to estimate the other component instead of camphor. "For instance," he said, "mannite has scarcely any rotatory power; on which side I do not remember, although I was the one to first determine it, and yet all its combinations rotate most powerfully in the opposite direction." M. Léger maintained he had taken all the precautions necessary, and was within reasonable limits sure of his figures.

Finally, while M. Boymond was reading a notice on the new Austrian Pharmacopœia, a ballot was taken for a resident member. M. Béhal was elected. Several foreign corresponding members were also chosen.

Legal Reports.

THE SALE OF POISON.

AT Alfreton Petty Sessions on Friday, November 1, before Mr. F. N. Smith (chairman), Mr. T. H. Oakes, and Mr. C. R. Palmer-Morewood, William Samuel Greaves, chemist, of Ironville, was summoned for having sold strychnine to Edith Platts, she being a person unknown to him, and not being introduced by some person known to him, on October 10. The defendant pleaded technically "Guilty." It will be remembered that Edith Platts purchased the poison, and with it committed suicide. Ernest Walter Greaves, son of the defendant, stated that between half-past seven and eight o'clock he was as usual in the shop on the evening in question. Edith Platts came to him and asked for a threepenny packet of Battle's vermin-killer. He asked her what her name was, and she replied, "Elizabeth Salt." Witness reached the poison-book and asked her to sign her name, which she did. She said that she lived at Riddings. He asked her for what purpose the poison was required, and she said it was wanted for destroying mice. He then supplied her with the poison. Superintendent Hancock: She was unknown to you, wasn't she? Yes.—And she had no witness to introduce her? No, sir.—Superintendent Hancock said that the law required that the purchaser should either be known to the seller or introduced by a witness who was known. In answer to the Bench witness said that he had not been told to be careful not to sell poison to strangers unless they brought a witness. He had been told to put the date, the name, and address in the register of the purchases, and for what purpose the poison was required. The defendant said that he believed this was the only case in the whole of his poison-book in which there had been such an irregularity. They had, as a rule, been most careful. He had done everything to prevent any possibility of such a thing occurring again. The Chairman: If this had been done before this poor young woman might have been alive now. After further consideration the chairman said that the Bench considered that this neglect on the part of the defendant was very serious indeed. It was unfortunate that the necessary orders had not been given until this sad case had

occurred. They hoped this case would be a warning to the defendant and to other chemists. He would be fined 2*l*. and the costs, which amounted to 14*s*.

[This prosecution, it will be noticed, was undertaken by the police under the 17th section of the Pharmacy Act, and, in accordance with that section, the person on whose behalf the sale was made was responsible for the due execution of the formalities required. But the person who actually sold the poison, being an unregistered person, is also himself liable to a penalty under the 15th section; but for this only the Pharmaceutical Society can sue.]

UNITED STATES LAW ON TRADE-MARK TITLES.

IN September last an important decision was given by Judge Mayer at St. Louis, in the United States District Court, in a criminal action brought against certain St. Louis druggists by the Battle & Co. Chemists' Corporation for alleged infringement of what they claimed to be their trade-mark—"Bromidia." It seems that the agents for this firm went around and called for a small quantity of bromidia, and all were arrested who did not dispense the article made by Battle & Co. One of the first druggists to consult a lawyer was advised to plead "Guilty," and did so. This caused nearly all of the others to follow suit and pay the costs; but Henry Brann and Frank Sohn elected to defend their cases. Judge Mayer held that registration was not in itself proof of the validity of a trade-mark. It is not a grant of any right or privilege, but merely a recognition on the part of the Government of the existence of an asserted exclusive right to affix a certain mark, symbol, word, or device on certain goods as a trade-mark. He said it was necessary, therefore, that evidence should be submitted to show that the person or persons claiming the trade-mark had actually created a property in the trade-mark by commerce. They had not offered this evidence, and, therefore, under the penal statute which they invoked the indictments were bad. The judge said the owner of a trade-mark acquires the same by acts wholly independent of the registration thereof, and registration is not even necessary to entitle him to protection in civil proceedings, although it is necessary to secure the protection of the penal statute. On the grounds thus stated the judge dismissed the charges; but the cases are to be carried to the United States Supreme Court. Another allegation of the defence was that the penal Act of 1876, under which the indictments were laid, was one which the United States Legislature was not competent to pass. From another source we learn that a Mr. Gustav Koch was one of the few who determined to fight the matter out to the end. His case was decided in the United States Circuit Court, September 27, where it had been taken on an appeal from the district court. Judge Brewer, who was then on the bench, said the law of 1876 (under which the case was brought) was based on the law of 1870. This law had been declared unconstitutional, hence any law based on it could not be held constitutional. The demurrer to the indictment was overruled and quashed, and Mr. Koch discharged. His lawyer's fee cost much more than it would have amounted to to plead "Guilty," but he had the fun of coming out ahead.

FALSE CERTIFICATE OF DEATH.

AT the Dalston Police Court, on Tuesday, November 5, Mr. Besley, representing Mr. Arthur Blount, surgeon, of 2 Alexandra Road, Hornsey, appeared on an adjourned summons, served on his client by Mr. Townley, superintendent registrar for the district, acting on behalf of the Registrar-General, and alleging that Dr. Blount had issued blank certificates of death, with his signature appended, for the use of an unqualified practitioner of the name of Cooper, also residing at Hornsey. The case had been adjourned to allow Dr. Blount to communicate with the Registrar-General. This he had done through his solicitor, with the result that Mr. Townley had been instructed to unconditionally and entirely withdraw the summons. Mr. Townley said if Mr. Blount had put himself in communication with him or the Registrar-General, and given the explanation he had since made, he would have saved himself considerable trouble. Mr. Besley replied that it did not appear on the summons who had issued it, and his client did not quite understand the

allegation till he came into court. The action had been most unwarranted, and he would ask the Court to dismiss the summons with such costs as would entirely exonerate his client, and show that he had not allowed the person mentioned to use his name. The magistrate said he was perfectly satisfied that Dr. Blount had nothing to do with the certificates, and he left the court without a stain upon his character. The action was dismissed, 5*l.* 5*s.* being allowed for costs.

A PARTNERSHIP QUESTION.

At the Dudley County Court on Tuesday, before Judge Sir Rupert Kettle, the case of *Wyley v. Clarke* was called for hearing. Mr. Young (instructed by Mr. Masser, Coventry) was for the plaintiff, and Mr. Kettle (instructed by Mr. Waldron) was for the defendant. Mr. Young, at the outset, said terms had been agreed upon, and these need not be made public. His Honour: Just so. This was a case arising out of an action brought against Mr. C. F. G. Clarke, lately a chemist, who dissolved partnership with his son, and left the latter in his business without giving in the first case sufficient notice of the dissolution. When other actions were threatened on the success of the first, his Honour stated publicly that all cases would have to be tried on their merits, and not on the terms of the first. The case on Tuesday was the second brought into court.

THE PHARMACY ACT.

At the Southampton County Court, on Tuesday, Nov. 5, before Judge P. M. Leonard, the case of *The Pharmaceutical Society of Great Britain v. Charles Tyrell* was decided. It had been adjourned from October 22 for judgment. The action was to recover five penalties of 5*l.* each from the defendant, proprietor of the St. Luke's Drug Stores, Bevoir Valley, Southampton, for having on September 17, 19, 21, and 24, sold arsenic, chloroform, laudanum, belladonna, and prussic acid, he not being a pharmaceutical chemist. The sales were admitted, but it was contended that defendant's partner being a pharmaceutical chemist, no offence had been committed. His Honour took time to consider his decision, and now announced it as follows:—This is an action adjourned from the last court, judgment being reserved in deference to a suggestion from Mr. Bell. At the same time I expressed myself that I had very little doubt as to the law on the subject. I have carefully considered the points raised in the action, and I am of opinion that there is no defence to it. This Act is one of the most useful that has ever been passed for the benefit of the public, and there is every provision in it for the public. Taking section after section, the whole spirit of the Act is to prevent persons not qualified from dispensing and selling poisonous compounds. The point raised by Mr. Bell is met by the section of the Act which provides that the person so disposing of the poisons must be a duly-qualified person.

Mr. Bell: My point was, that where one of the partners is duly qualified the other partner, though not so qualified, can sell.

Judge Leonard: There is no such provision in the Act.

Judgment was then entered for plaintiff, payment in fourteen days.

TAKING A CHEMIST'S SHOP.

In the Lord Mayor's Court, on Tuesday last, the case of *Cumberland v. Sanderson* came before the assistant-judge (Mr. Roxburgh) and a jury. The plaintiff in the case sued the defendant to recover 13*l.* 10*s.* for rent of a chemist's shop at 89 Plaistow Road, West Ham, and for 8*l.* 10*s.* for the alleged wrongful detention of two lamps, and 1*l.* damage to a shutter. The defendant counter-claimed for 50*l.* damages for not being able to carry on the business as a chemist and druggist, owing to necessary repairs not being completed, and also for 2*l.* 5*s.* money lent.

The plaintiff, Mr. Arthur Cumberland, merchant, West Cliff, Ramsgate, said that he advertised 89 Plaistow Road as to let, and in consequence he received a letter from the defendant. Negotiations were entered into, and in the end the defendant agreed to take the premises at an annual rental

of 52*l.* The arrangement was not in writing. The fixtures in the shop were sold to the defendant for 35*l.* Mr. Ellis, a former tenant, had carried on the business of a wholesale chemist and druggist previously for six months. The defendant went into the place about November, and left on March 24 without paying the rent. Plaintiff said he had seen the defendant since, two or three times. The defendant then said at first that if the matter was left for a day or two he would pay something, as he had been put to a lot of expense in fitting up the shop opposite, which he had taken. The second time he said he would get his brother to send a cheque. The last time he called defendant told him that he had a tricky lawyer, and he thought he could do him out of his rent. (Laughter.) When he left defendant took with him a large crystal-globe lamp, which he (the plaintiff) valued at 7*l.* 10*s.* It was hanging out of the defendant's present shop. He also took another lamp valued at 30*s.*, and promised to pay for both. He had also damaged the shutters by posting bills over them when he went away, and they had to be painted and varnished.

In cross-examination plaintiff said that the defendant, when he left, did not say a word to him, and he did not know he had gone until after quarter-day. There had been a fire on the premises two or three months before, but an inspector had passed the place and no repairs were required. The place had been occupied by several doctors prior to Mr. Ellis. A Dr. Causland had had the premises, and he took 9*l.* a week. He (plaintiff) knew that himself, because his son was assistant to the doctor. The two lamps were not included in the fixtures and fittings. There was no schedule.

Mr. William Wood, a builder, stated in evidence that he valued the lamps at 10*l.*

Mr. Thomas Sanderson, the defendant, 54 Plaistow Road, said that he had been in partnership with his brother in a tolerably prosperous business at Birmingham. Early in November his attention was called to an advertisement in *THE CHEMIST AND DRUGGIST*, and in consequence he wrote to the plaintiff and went over the premises. Mr. Ellis, the occupier, promised that certain repairs should be done. He saw the plaintiff at the office of his solicitor, and he (defendant) refused to sign any lease or agreement until the repairs had been done, and upon that the plaintiff promised to have the repairs done, and he also represented that a chemist's business had been previously carried on, and upon these representations defendant came to London and took up possession.

Mr. W. N. M. Scrutton, a solicitor, said he was present at two interviews between the plaintiff and the defendant. The latter wanted the place put in repair, and the plaintiff promised to do so.

Evidence was also given as to the value of the lamps, and ultimately the jury found for the plaintiff for 14*l.* on the claim, and for the defendant for 17*l.* 5*s.* on the counter-claim.

Trade Notes.

It is now announced that a limited company has been formed, with a capital of 2,500,000 marks, in 1,000-mark shares, to continue the business of Hell & Sthamer, chemical manufacturers in Billwärder, near Hamburg.

MESSRS. CORBETT & WYATT, of Stourbridge, announce that they have secured new premises for their business at 138 High Street, Stourbridge, where they will trade under the designation of Hughes, Beckwith, Wyatt & Co.

MME. VVE. LESAULT, the proprietor of the wholesale drug and herb business at 38 Rue de la Verrerie, Paris, announces that she has taken into the partnership MM. Lyon and Legoux, who have long been connected with the firm, while retaining her own interest in the business.

MESSRS. SEABURY & JOHNSON are issuing a circular describing forty kinds of plasters for dermatological use. The feature of these plasters is that they contain a definite portion of the medication to the square inch, and, therefore, definite quantities of external applications can be prescribed in this form. These circulars are supplied for distribution.

MESSRS. R. W. GREEFF & Co., 29 Mincing Lane, have been

appointed agents for Mr. J. H. Dudek, of Bernsdorf, in Germany, a manufacturer of zinc oxide. Messrs. Greeff also ask us to state that they represent the firm of Blanc fils., aîné, Em. Bourgogne & Cie., of Marseilles, whose oils were referred to in our last week's report of the Paris Exhibition.

THE partnership hitherto existing between Messrs. Frederick John Horniman and Samuel Robert Brewerton, as tea merchants, has been dissolved by mutual consent. The business will be carried on under the old style of "W. H. & F. J. Horniman & Co.," by Mr. F. J. Horniman. Mr. S. R. Brewerton continues to have an interest in the business.

THE partnership which has hitherto existed between Messrs. H. H. French and G. A. Marshall, colonial brokers, of 36-37 Mincing Lane, E.C., has been dissolved, and Mr. French withdraws from the firm. Mr. Marshall has taken into the partnership Mr. William Read, who has been connected with his firm for the past twenty years, and the business will be continued under the same style as before.

MR. FREDERICK R. CRESSWELL, of the firm of Cresswell Brothers, sponge merchants, 1 and 2 Red Lion Square, has arrived at Ægina, Greece, to superintend the operations connected with the season's collection. Messrs. Cresswell's manager at Ægina reports that their own boats have been successful, and that the season generally has been productive of excellent results, both as regards quantity and quality.

MESSRS. HEARON, SQUIRE & FRANCIS send us samples of and printed particulars concerning the Saint Marco lithia water for which they have become the sole consignees, and which they are now introducing to the medical profession of this country and the colonies. The water is obtained from a spring in Tuscany, and seems to have attained to a high reputation in Italy in the treatment of gouty affections and diseases of the urino-genital organs. It is highly charged with gas naturally, and as a table water is very similar to seltzer. According to the analysis, it contains '036768 gramme of carbonate of lithium, with small proportions of other alkaline salts, amounting in all to $2\frac{1}{2}$ grammes in 1,000 grammes of the water. Testimonials from eminent authorities as to its curative properties are published.

Personalities.

AT Lampeter municipal election Mr. R. Evans, chemist and druggist, has been elected at the head of the poll.

MR. H. P. FOSTER, chemist and druggist, of Portsea, has been re-elected to the Portsmouth Town Council.

AT the Burnley election Mr. William Parkinson, chemist and druggist, has been returned to the Town Council as one of the representatives of St. Peter's Ward.

MR. EX-SHERIFF PERKINS, chemist and druggist, Lichfield, has been returned unopposed as a member of the Lichfield City Council.

MR. GEORGE BREEZE, chemist and druggist, Devonport, has been re-elected without opposition to represent the Liberal interests in St. Aubyn's Ward, in the Town Council.

MR. R. H. RENDLE, chemist and druggist, has been returned by the Liberals of Clarence Ward, Devonport, at the late municipal election.

MR. GEORGE LINNELL, son of Mr. Linnell, chemist and druggist, of Peterborough, has become a director in the firm of Allchin, Linnell & Co., engineers and merchants, of Northampton, and will also act as secretary to the company.

MR. THOMAS FURNESS, chemist and dentist, of 30 Knife-smith Gate, Chesterfield, has obtained the degree of Licentiate in Dental Surgery from the Faculty of Physicians and Surgeons, Glasgow.

MR. W. LLOYD WILLIAMS, A.I.C., who has recently been working in the Pharmaceutical Society's research laboratory, is about to join Messrs. John Moss & Co.'s staff at Galen Works, and will have charge of their laboratory.

MR. THOS. J. SMITH, M.P.S., wholesale druggist and

importer of cod-liver oil, of Hull, has been elected unopposed for the third time a councillor for Queen's Ward—one of the largest and most important wards in the borough.

MR. J. H. WILSON, pharmaceutical chemist, Harrogate, has been elected to represent the Central Ward. Mr. Wilson is a director of the Chemists' Aerated and Mineral Waters Association (Limited), and was returned at the head of the poll by a large majority.

JOHN COTTAR MORISON, a noted literary man, author of "Macaulay" in the "English Men of Letters" series, whose library has lately been sold, was the son of the Morison of pill fame; and this left him all his life with an ample competence. He was a famous Greek scholar, and a man of encyclopædic knowledge generally.

THE Chippenham chemists seem willing to take their share of the municipal work of the town. At the late Council election for twelve members, all the councillors having retired, three chemists were successful, namely, J. C. Coles (Liberal), who was third; E. Neale (Conservative), who was sixth; and A. Turpin (Liberal), who appeared ninth on the poll.

MR. S. M. BURROUGHS does not aspire to parliamentary honours. Writing to an evening contemporary he says:—"I think a member of Parliament should be in a position to give his time chiefly to the public interests which he is elected to attend to. My work would not allow me to do this, and, moreover, I shall be well satisfied if I am able to be a good and useful citizen in whatever humble sphere I can be of most service to society."

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

ROBERTSON—SIMPSON.—On November 2, at Castlemilk, Rutherglen, by the Rev. Mr. Gall, David Stewart Robertson, chemist, Rutherglen, to Margarie Simpson, youngest daughter of James Simpson, Castlemilk.

DEATHS.

BARCLAY.—On November 3, Mr. John Barclay, of Woodlane, Falmouth, died suddenly whilst returning from afternoon service. Mr. Barclay was formerly member of the firm of Warner & Barclay, chemists and druggists, of London. He had been residing for a long time in Falmouth, and was a commissioner for income-tax.

BUCK.—We announced last week the death, on October 3, 1889, of Mr. George Buck, pharmaceutical chemist of Great Britain, at Chicago, where he had lived since 1854. Mr. Buck, who, as we then stated, was a native of Rochester, and had served his apprenticeship and studied as a pharmacist in this country, and went to America in 1854, was 62 years of age at the time of his death. He took a very prominent part in the pharmaceutical politics of his adopted state, and was president of the Chicago College of Pharmacy in 1872, when the books, apparatus, &c., collected by Professor Atfield and others were received from the pharmacists of Europe after the great fire, "to be accepted and held as a sacred trust for the benefit of the druggists of Chicago and their successors for ever." He was first president of the Illinois Board of Pharmacy, and held the position for over five years. The reputation he had acquired for cautious administration had earned him the title of the "balance-wheel." He was a man of liberal education, and held a high place in the esteem of his associates in business and in citizenship.

HOLT.—On October 22, Mr. Horie Holt, chemist and druggist, Duke Street, Lower Broughton, Manchester. Aged 53.

PERRY.—On August 21, Mr. Solomon Perry, chemist and druggist, Tavistock. Aged 68.

PRIDE.—On October 31, 1889, Mr. Charles Pride, chemist and druggist.

ROSSON.—On October 25, Mr. John Henry Rosson, chemist and druggist, High Street West, Glossop. Aged 39.

Gazette.

PARTNERSHIPS DISSOLVED.

Amondson, F., & Heale, F. A., Harvist Road, Holloway, mineral-water manufacturers.

Farmer & Worsley, Chorley, physicians and surgeons.

Gregory & Wrenn, Tannton, chemists and druggists.

Marshall & French, Mincing Lane, City, East India and Colonial brokers.

Nuttall, Charles, & Sons, Bacup and Bury, surgeon dentists.

O'Hara & Heatly, Kingston-upon-Hull, physicians, surgeons, and accoucheurs.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Evans, John Robert, Denbigh, chemist and druggist.

Finch, Roland, Boleyn Road, West Ham, and Victoria Docks, and late of Margery Park Road, Forest Gate, chemical manufacturer.

Halsey, Walter, Watford, formerly mineral-water manufacturer, now out of business.

Tyson, Thomas Balmforth, late of Worthing, pharmaceutical chemist.

ADJUDICATIONS

Halsey, Walter, Watford, formerly mineral-water manufacturer, now out of business.

Tyson, Thomas Balmforth, late of Worthing, pharmaceutical chemist.

NOTICES OF DIVIDENDS.

Nettleship, Anne, Sheffield, drysalter—first and final div. of 3s. 2d., Nov. 7, Official Receiver's office, Sheffield.

Norman, William Francis, Leamington and Milverton, chemist and druggist—composition, second instalment of 3s. 6d., Nov. 15, Official Receiver's office, Coventry.

Somerville, Thomas Townsend, Sheffield, surgeon—first and final div. of 4s., Nov. 7, Official Receiver's office, Sheffield.

Tyrer, James, Walsall, oil and colour dealer and drysalter—first and final div. of 11d., Nov. 8, Official Receiver's office, Wolverhampton.

FIRST MEETINGS AND PUBLIC EXAMINATIONS

Lloyd, Edward, Northwood, chemist and seedsman—Nov. 15, Official Receiver's offices, Newcastle-under-Lyme; Nov. 22, Town Hall, Hanley.

Stone, Edwin Charles, Snow's Fields and Guy's Place, Bermondsey, and Hanover Buildings, Tooley Street, Southwark, drysalter and sundryman—Nov. 13, 33 Carey Street, Lincoln's Inn Fields; Nov. 26, 34 Lincoln's Inn Fields.

EXTRACT FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act, making any of these arrangements binding upon dissenting creditors.

Bolton, Richard Charles Edward, Bardney, surgeon. Trustee: Joseph M. Collingham, Lincoln, draper. Date, October 29; filed, November 1; unsecured liabilities, 1,417l. 13s. 1½d.; estimated net assets, 250l.

	£	s.	d.
Allen, Dr., Staunmore, N.W.	245	0	0
Barrett, Miss, Dublin	500	0	0
Battle, Son & Maltby, Lincoln	35	0	0
Brackenbury, —, Bardney	18	5	4
Cox, A. H., Brighton	18	0	4
Hall & Son, Lincoln	25	6	6
Lane & Phillips, Dublin	19	18	0
Mawer & Collingham, Lincoln	68	5	7
Pratt, C., & Son, Lincoln	12	0	0
Richardson, John, & Co., Leicester	12	15	0
Smith, Ellison & Co., Lincoln	28	0	0
Tottenham, Mrs., Kensall, Ireland	316	0	0
Trotter, R., & Son, Lincoln	11	0	4
Whitton & Ashley, Lincoln	12	7	4

PHOTOGRAPHIC NOTES.

(Written for THE CHEMIST AND DRUGGIST.)

EIKONOGEN; A RECENTLY DISCOVERED ORGANIC DEVELOPER FOR PHOTOGRAPHIC DRY-PLATES AND PAPER.

Agents, Marion & Co., 23 Soho Square, W.

We received this with some degree of scepticism, as, notwithstanding the advertisements, we supposed it to be nothing more than a modification of quinol; but we must admit our error, and were completely taken by surprise at the result of our trials. Numerous plates of different brands were given, exposures varying from one-hundredth second up to two seconds, and were then developed with pyrogallol, quinol, and eikonogen. With all it was found that eikonogen was extremely energetic, and with the shorter exposures very fair negatives were obtained, whereas with pyro and quinol practically nothing but fog resulted. It is needless to enter more fully into the experiments, though the following test was extremely trying and showed well the power possessed by this new reducing agent. Three snap shots at a steamer going down the river at 7.30 A.M.—light fair, very misty, no sun—were made, and one plate was developed with pyro; result, river and sky only showing; faintest possible trace of steamer. The second, developed with quinol, gave slightly better results, but neither negative would yield a print. The third, developed with eikonogen, gave a very fair, but under-exposed, negative, which yields a passable print. We can thoroughly recommend this preparation as a developer of extraordinary power and energy; in fact, with some of the longer exposures we found it necessary not only to add bromide of potassium as a restrainer, but actually to throw off the normal developer, and use one weaker in alkali; as it was one plate was hopelessly flat and thin from over-exposure, although with pyro and quinol good negatives with no sign of over-exposure were obtained. In the directions for use the weights in the three different formulæ are appended in the metric and English (apoth.) systems, and also by parts. A preliminary bath of hyposulphite of soda and perchloride of mercury is recommended for instantaneous pictures, and we have found this of great value.

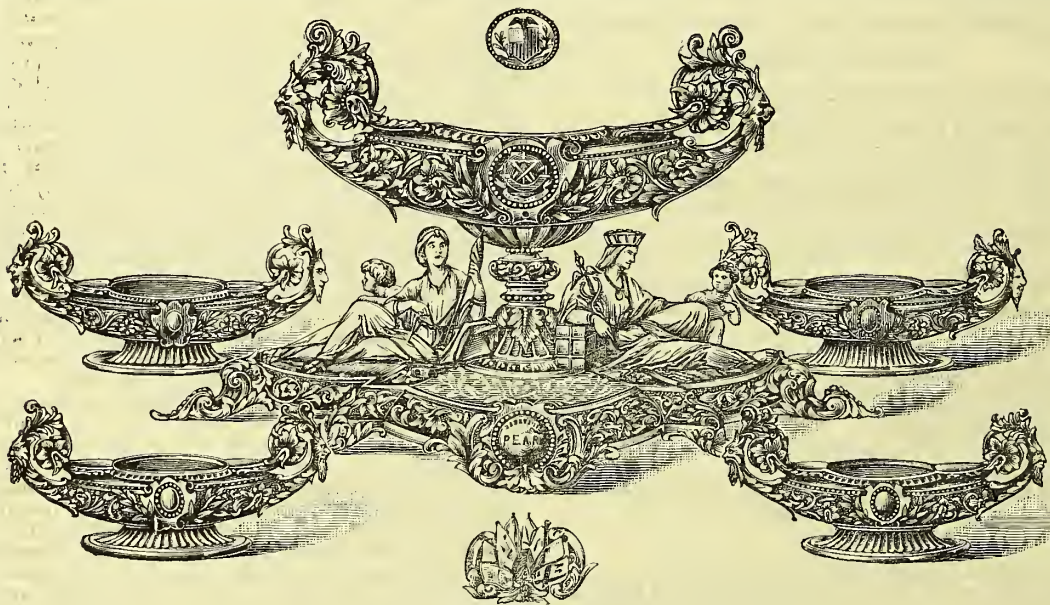
Commercial carbonate of soda (washing soda) is recommended as the accelerator except for very rapid work, when caustic potash is used; but we have found that the formulæ given are almost too rich in soda, and that a reduction of this salt and the addition of a little bromide for time-exposures is desirable. Eikonogen is sent out in neat little tin cases of $\frac{1}{10}$, $\frac{1}{4}$, $\frac{1}{2}$, and 1 kilo, respectively; it is a fine light powder with a plentiful sprinkling of micaceous crystals, permanent in the dry state, and much more so in solution than either pyro or quinol. It is readily soluble in water, forming a slightly reddish-brown solution, which, on the addition of sodium sulphite as a preservative, turns to a splendid bottle-green hue. The negatives produced by it have an exceedingly fine deposit of a bluish black colour, more of the quinol image tone than pyro. We have found the old developer may be kept, and very advantageously used to commence development with till all details are out, when density may be obtained by a fresh solution. It has also answered well in our hands for bromide paper and transparencies, although we have found an old developer, or a fresh one much diluted, the best for this purpose. One curious experience we had was applying a plain aqueous solution of eikonogen and bromide to a much over-exposed plate, when the image immediately began to start into life, and we obtained a good negative without the use of any alkali at all. There is practically no staining either of films or fingers, and we can thoroughly recommend it as being a great advance in the science, and a valuable assistance to the practice of photography, and actually what is claimed for it, viz., "an accelerator of the plate." It was discovered by Dr. M. Andresen, of Berlin, in the beginning of the present year, who holds the patent for it in all countries; notwithstanding this its price is not excessive, and from the method of using the old developer, it will certainly be found to be one of the cheapest developers both as regards price and strength.

THE PEARS CENTENARY.

BARRATT PRESS BANQUET.

ON Wednesday, November 6, the centenary year of the firm of Messrs. A. & F. Pears was worthily celebrated by a splendid banquet given in their honour principally by the proprietors of the newspapers of the English-speaking world, and advantage was taken of the occasion to present to Mr. T. J. Barratt, the partner in the firm who has conducted their colossal advertising, with a substantial testimonial in recognition of the enterprise, ability, and pluck which he has brought to bear on his great trade. The scene of the banquet was the Whitehall room of the Hotel Métropole. Sir Algernon Borthwick, Bart, M.P., the proprietor of the *Morning Post*, occupied the chair, and the company, which numbered in all nearly two hundred, included representatives of every kind and class of journal. Many of the most eminent representatives of London and provincial journalism were present, and others delegated by American and Australian papers. All sides of Parliament were represented, as, besides the chairman, Messrs. Ashmead-Bartlett, Frank Lockwood, Q.C., T. P. O'Connor, and J. W. Maclure were at the tables. Mr. T. J. Barratt and Mr. Andrew Pears occupied places of honour, the former at the right of the chairman.

that when man was condemned to labour he found it necessary to cleanse himself. He had seen the Egyptians use Nile mud as soap, and, though that was not so attractive and agreeable as the soap made by Messrs. Pears, it seemed to be effective. It was said that the Romans learned the art of making both hard and soft soap from the Germans, and he believed it was a fact that at the present day the Latin races were still behind those of Teutonic origin in regard to the quantity of soap used. Perhaps we need it more. Anyway, it is to-day an article of vast commerce. Many firms are engaged in its manufacture, but they were just then concerned with one in particular. They were celebrating the hundredth anniversary of the establishment of the firm of Messrs. Pears. In that room were assembled representatives of British, American, and colonial newspapers, and they were there to congratulate this great firm on their success, and to compliment them on the means by which they had brought it about. A hundred years ago the founder of the house had a little shop, and did a small business; but he had a true English spirit, and he set to work to do his work thoroughly. In 1809 they had a great lawsuit, which established the right of Messrs. Pears to make transparent soap, and they had made it ever since. About twenty-five years ago their guest that evening had come into the firm, and had conceived the idea of promoting the business by enlisting the services of newspapers and art on a large scale. He employed R.A.'s,



THE SILVER DESSERT SERVICE.

Colonel North appeared for the financial world, and Sheriff Harris and Under-sheriff Beard officially represented the City. The Lord Mayor was expected, but his place was vacant; it was announced that at the last moment he had found it impossible to be present. The string band of the Royal Artillery performed a selection of music during the dinner, and Madame Clara Samuel, Miss Marian Mackenzie, Mr. William Coates, and Mr. Adams Owen gave solos and part-songs during the evening. The toasts were few, and the speeches were crisp and interesting. The chairman proposed "The Queen" in twenty loyal words, and next Mr. Charles Cross gave "The Houses of Parliament." Mr. Lockwood, Mr. Maclure, and Mr. T. P. O'Connor, in responding, contributed amusing speeches, but neither made any attempt to educate his audience politically. The burden of replying to this toast was to have devolved on Mr. Ashmead-Bartlett, but that statesman only arrived rather later in the evening. The toast of

"MR. T. J. BARRATT"

came next, and this was offered by the chairman in a very felicitous speech, which was sympathetically applauded. Sir A. BORTHWICK said he would not, he supposed, be expected to give them an article on the history of soap. He expected it was not in use before the Fall, but

and placed their pictures on the walls, and surely it was a pleasure for the public to see them. In these days of Socialism, when the idea was spread about that the great capitalist stored up the money he made in sacks, the career of this firm was worth noting. From a business with one or two assistants they had become a great manufacturing firm, employing hundreds of hands, and, as they made more profits, rolling up more enterprise; giving business to newspapers, to lithographers, to paper-mills, to printers, and to bill-stickers. This capital making and using was like the processes of nature raising water to the clouds and spreading it on the earth again in fertilising showers. In cases like this the increase of wealth meant greater happiness to a greater number. The money had been well earned and well spent. They met, then, to congratulate the firm on their success, and Mr. Barratt, who was held in universal esteem, on the extraordinary development he had given to the business, and Mr. Barratt might well be proud to receive from the Press of the world that handsome testimonial, that beautiful specimen of the silversmith's art which he had now the honour to present to him. It was a work of art worthy of the man and worthy of the occasion. It was a source of great pride to him to have been selected to present this testimonial.

The gift, which it was understood was of the value of 1,000*l.*, was a solid silver dessert service, consisting of two

large jardinières for fruit or flowers, and four small dishes for fruit. Each jardinière takes the form of an antique bowl resting on a bell-shaped stem, which rises from the centre of a massive silver plateau, supported by richly-chased scroll feet. The body of the bowl is beautifully decorated in high-class repoussé style after the Renaissance period, and has on the obverse and reverse heraldic shields with suitable borders, and bearing respectively the arms of the recipient and that of America, all enamelled in proper colours. Springing from the ends of the bowl are two exceedingly graceful scroll-work handles, in the interlacing of which are introduced masks and other ornaments appropriate to the design. Reclining on the plateau are two groups of classical figures, emblematic of industry and commerce, with their attendant geni and various attributes. On front of plateau is placed a classic shield surrounded by bay leaves, and bearing the following inscription:—

PRESENTED TO
T. J. BARRATT, ESQ.,
1889.

The shield on the opposite side is similar in form, and has the flags of Great Britain and of the different colonies enamelled in proper colours.

This beautiful service is modelled in the highest style of the silversmith's art, and had been designed and manufactured by the Goldsmiths and Silversmiths' Company, 112 Regent Street, W.

With the service was presented a volume containing the names of 1,700 newspapers which had contributed.

Mr. BARRATT, who was received with long continued cheering, said perhaps they would hardly give an advertiser due credit for modesty, but he claimed that as one of his most marked traits, and he wanted to refer to his firm and himself with as little egotism as possible. All good Americans trace their ancestry to the *Mayflower*, which must have been a veritable Noah's Ark. Englishmen went to the Herald's College, but they were not all able to trace their ancestry back to the blue blood of the Normans. But their firm had a record of 100 years, and dated back to a small barber's shop, and the originator of the business had conducted it on the same principles of integrity which those who came after him had endeavoured to emulate. During the twenty-five years he had been associated with his partner, Mr. Andrew Pears, they had never had one ill word, nothing but the greatest harmony had prevailed in their councils, and now when their term of partnership was nearly at an end they had agreed to renew it for another twenty-one years. Their success was very largely due to Mr. Pears' skill as a chemist and manufacturer, for unless they supplied a perfect article no advertising skill would ever have produced satisfactory results. He was perfectly certain that if it had not been for the newspapers which those present represented they would never have been enabled to make so satisfactory a return to Somerset House. Soap advertisements were to be found on the walls of the baths of Pompeii, and the manufacture might be said to be coeval with Christianity. They were constantly increasing the amount of their advertisements, and they had now attained an expenditure of more than 100,000*l.* per annum, which he thought was a fair contribution for one firm to make towards the extension of the Press of the country. It had stimulated exertion on the part of other houses, both in this country and in all parts of the world. What did they get for this 100,000*l.*? He calculated that they got a circulation of 20,000,000 per day for their advertisements; that they visited daily almost all the houses in Great Britain, America, and Australia, and their stores in all these parts of the world were open all the twenty-four hours. If they knocked at any door 365 times a year it was very odd if once in that year the person addressed did not buy a tablet of soap. That was the secret of their success, and he thanked the newspapers for the way they had aided him. It was a mistake to suppose that great advertising increased the cost of the article advertising. To-day they sold their goods more cheaply than they had ever sold them before. He thanked the givers of that handsome present most heartily, most cordially, most sincerely, which would always recall the pleasure of that evening; and he hoped the very pleasant relations he had had with the Press would long continue to mutual advantage.

The CHAIRMAN said he should call on Mr. Andrew Pears to say a few words, but he had first to make an announcement—that was that the firm had just handed him

A CHEQUE FOR 1,000 GUINEAS

for the Newspaper Press Fund, a fund in which he took a deep interest. This announcement was received with rounds of applause.

Mr. Andrew Pears added a short and effective speech. Mr. Brown, of the *New York Herald*, replied to the toast of "The Press," and Mr. Edmund Routledge proposed the health of the chairman, whom he described as the greatest political enemy he had on earth, for he had prevented him from representing North Kensington in Parliament. Apart from politics they were all proud of the position which Sir Algernon Borthwick had attained, and if it should ever please the Government to promote him to the House of Lords, no one would be more heartily pleased than himself.

Foreign and Colonial.

THE other day the factory of Alomar & Uriach, wholesale druggists and manufacturers of pharmaceutical preparations in Barcelona, was burnt to the ground, several employés being killed, and a considerable number sustaining severe injuries. The establishment was one of the largest of its kind in Spain.

AMERICAN PREPARATIONS IN SPAIN.—According to recent calculations the consumption of Florida-water in Spain is 50,000 bottles per year. Each bottle pays 8½*d.* Customs duty. Of "Bristol Sarsaparilla," an American preparation, 30,000 bottles are sold every year, the duty on these amounting to about 1,600*l.* Of "Bristol Pills" 10,000 boxes are sold per year, and the duty on "Scott's Emulsion" brings in 2,300*l.* per year, the total Customs revenue on the four preparations above named being 151,206 pesetas, or over 6,000*l.*

THE SECOND ANNUAL CONGRESS of the Italian Pharmaceutical Association, which was founded in Bologna last year, was held in Rome this year between October 4 and 6, under the presidency of Professor Vitali. The association now numbers nearly 3,000 members. At the recent meeting the committee was instructed to formulate a plan for the establishment of the pension fund, and also one for a co-operative society for pharmacists. It was further resolved that pharmacy ought to be created a special branch of study at the Italian universities. Professor Vitali was elected hon. president in perpetuity of the society.

OPIMUM IN CHINA.—In a pamphlet on opium in China, by Dr. Edkins, the well-known missionary of Peking, the view entertained in many quarters that opium was introduced in recent years from India to China is shown to be false. Dr. Edkins says that the Arabs took opium to China in the eighth century, at a time when there was a flourishing trade between Canton and the ports of the Red Sea and the Persian Gulf. The medicinal properties of the drug are mentioned in a work published in the tenth century. From this time it was cultivated for these properties, and from the fifteenth century it appears plain that the manufacture of native opium has existed in China, and it is not only in recent years that there has been both native and foreign opium in this country. The smoking of opium came in with the smoking of tobacco in the seventeenth century. Various ingredients, says Dr. Edkins, were, in various countries, mixed with tobacco to try their effect, amongst them being opium. The Manchus tried to prohibit the use of tobacco by edicts as stringent as those issued against opium, but in vain. Amongst the causes of this failure the writer includes the love of opium-smoking by many in high positions—Court favourites and others—whom it would be very difficult to punish. Opium-smoking began in Formosa and Amoy, where tobacco-smoking was first introduced. The first edict against the practice was in 1729. Opium was a common product of Yunnan in 1736, and in those days this distant province was far remote from the influence of any foreign country whatever, except Burmah.

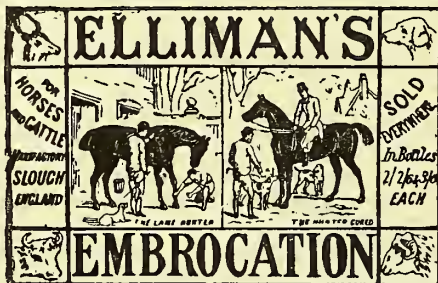
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EDITORIAL NOTES.

THE NEW DUTCH PHARMACOPŒIA.

THE most important pharmaceutical event of the week is,
 without doubt, the publication of a new edition of the Dutch
 Pharmacopœia. Its latest predecessor was published in
 1871, but was out of date within ten years after, so a Com-
 mission to revise it was appointed in June, 1884, and at last,
 in November, 1889, we have the new Pharmacopœia itself.
 It has been worth waiting for. From the title of the book
 to the smallest details of the descriptive text it has under-
 gone such a radical change as we would not have expected
 of conservative Holland. Elsewhere in this issue we give
 the first of a short series of articles on the new work, taking
 pharmacy, chemistry, and materia medica in their order; but
 here it will be useful to comment generally upon the principal
 points in which the Pharmacopœia differs from its prede-
 cessor. It will be in the recollection of many of our readers
 that some years ago an unofficial Commission of Dutch
 pharmacists did some excellent suggestive work in regard to
 their Pharmacopœia; that, doubtless, has had its bearing

upon the present Commission, which was composed of Drs. C. A. J. A. Oudemans (President), F. C. E. van Embden (Secretary), J. W. Gunning, E. A. van der Burg, G. D. L. Huet, B. J. Stokvis, and D. J. Coster; with Messrs. C. H. van Ankum and W. Stoeder. The President and Mr. van Ankum were members of the 1871 Commission, the others may be said to be new to Pharmacopœia revision. We may note that among the members of the Commission there were two apothecaries actually in business, six professors of pharmacy or allied subjects, and one a physician. They met for preliminary discussion for the first time on September 24, 1884, when they decided that the necessities of the case called for a thorough revision rather than a mere extension of the Pharmacopœia, and by the time they met again (February 1, 1885) they had decided which articles were to be retained and which expunged from the old Pharmacopœia. The Commission set itself to its task with a commendable breadth of view and openness of mind, for they decided to address a circular letter to the Dutch societies for the advancement of pharmacy and of medicine, and to certain official bodies known as the medical councils (*geneeskundige Raden*), requesting them to state which alterations they desired to have made in the new Pharmacopœia (with their reasons for desiring these), and what articles they would like to see added to or expunged from it. The bodies named were also particularly requested to invite local pharmaceutical and medical associations to express their views on these matters, and the important and extensive collection of suggestions and opinions gathered in this manner received the most careful consideration at the hands of the revisers. The terms under which the Commission was appointed expressly provided that its work of revision should embrace both the Latin and the Dutch editions of the Pharmacopœia, and after due consideration it was resolved to issue the new work in the first instance in the Dutch language, principally because, under a law which is about to come into operation, Latin has ceased to be a compulsory subject in the examinations for apothekers and medical practitioners in Holland, that classical tongue, in fact, having fallen into such a desuetude among the professions in that country that the Commission has had to record its opinion that a purely Latin Pharmacopœia would "no longer be generally understood." This, then, is the cause of the publication of the new work in the vernacular under the title of "*Nederlandsche Pharmacopœe*," for phonetic spelling is the order of the day in Holland, even in scientific circles. A Latin edition will be published later on under the name of "*Pharmacopœa Nederlandica*." It was decided to retain the alphabetical arrangement hitherto in vogue (on the basis of the Latin titles), and, although there have been slight alterations in some of the names, the order remains the same. In the latter department we have, therefore, an opposite arrangement to what is common in pharmacopœias; thus, instead of looking for, say, ammonium salts under A, we have to search for the group of salts, "*chloretum ammonicum*," "*brometum ammonicum*," and so on. There may be good reasons for this; perhaps, after all, it is purer Latinity than the system of placing the base (noun) first and the acid (adjective) second; but we are surprised at it, because the Commission have otherwise faithfully acted up to the principles of the Brussels International Pharmacopœia. A new departure in nomenclature was also decided upon, viz., prefixing the name of the specific part used to the Latin names of drugs. Thus "*cinnamomum*" has been changed to "*cortex cinnamomi*"; and so with all other barks, roots, leaves, &c. This also is contrary to International Pharmacopœia edict. We notice several minor changes of nomenclature, but these are mainly

of local interest. Perhaps the most useful alteration in this department is the addition of vernacular names and synonyms. As to the text, there were several rather important questions which the Commission had to consider and settle. In regard to simples it was decided to exclude the names of the natural orders to which the plants belong, as well as such other details as may be better relegated to text-books; but in regard to the characteristics of the drugs themselves the Commission wisely resolved to be very precise, and this they unquestionably have been, the work being done so thoroughly that we may take it as the high-water mark in pharmacopœia compilation. We have said that the Commission had to consider which articles would be rejected. They have not been too revolutionary in the process, but several most judicious selections have been made, such as cultivated red cinchona bark to represent the three barks official in the 1871 Pharmacopœia (on the ground that this variety offers the best guarantee that its composition will not vary much in future), and Tinnevely senna to take the place of the two kinds formerly recognised. The Commission have also followed the tendency of their co-workers in other countries by excluding particulars of the processes for the production of medicinal chemicals, and have given greater attention to the tests for identity and purity, thus recognising, for the first time, a somewhat complete system of volumetric analysis, as well as the assay of potent drugs and galenical preparations. There are many of the methods which it will be useful to refer to somewhat fully, and that we propose to do in the series of articles. We have already said that the Commission have followed the International Pharmacopœia principles; this is apparent chiefly in the quantities employed in making compound preparations. These have been altered to suit the decimal requirements. In some cases the alterations are of greater moment than would, to our thinking, warrant adherence to a general principle, but on the whole the characters and action of the preparations are not disturbed by the alterations. Several new classes of preparations—capsules, decoctions, antiseptic gauze and wool, infusions, &c.—are introduced and will be fully referred to. Extracts have undergone careful revision, "*percolation*" being recognised; even tinctures have been tinkered, and the Commission have done a most useful thing by giving the specific gravities of the last-named. We may also note that the fineness of powders is stated in numbers according to the calibre of the meshes through which the particles pass. A considerable number of new remedies have found a place in the Pharmacopœia, amongst them such articles as antipyrin, chrysarobin, eucalyptus (but not the oil), thymol, and so on. To these we shall also have occasion to refer more fully in a subsequent article. A governing idea of the Commission has clearly been to facilitate the creation of an International Pharmacopœia; in fact, this tendency is expressly acknowledged, and credit claimed for it as being a "step in the right direction." The indication of the maximal doses of potent remedies has been preserved, and a suggestion is made that such doses should also be added to the names of the remedies in the bottles in which these drugs are kept. The law in Holland compels the pharmacist to always keep in stock a supply of most of the Pharmacopœia remedies, those drugs the keeping of which is optional being indicated in the Pharmacopœia by a cross. Upon looking through this list we confess that we cannot understand the reasons which guided the Commission in the selection of the non-compulsory articles. The Dutch pharmacist, for instance, need not keep acetic acid, but salicylic acid he must have. Codeine is obligatory, but chrysarobin optional; compound tincture of cinchona need not, but the

simple tincture must, be stocked. Antipyrin, balsam of tolu, cantharides, stramonium, jalap, calamus, sarsaparilla, tincture of gentian, and all lozenges are optional. It is also recommended that a permanent Commission should be appointed to keep an eye on all new remedies, and to incorporate these, if desirable, in the present Pharmacopœia at stated intervals. One of the members of the Pharmacopœia Commission, Mr. C. H. van Ankum, apotheker in Groningen, unfortunately died before the publication of the work to which he had given a large amount of his time and much valuable assistance. As a curiosity we may mention that the new work is counter-signed by a Dutch Minister of the Interior, Aénas, Baron Mackay, who is himself a Scotchman by origin, and either a cousin or a brother to Lord Reay, the present Governor of Bombay, also a Dutchman of Scottish extraction, and formerly a distinguished member of the Dutch as he now is of the British Legislature.

BORAX.

IN the paper read on Monday night at the meeting of the Society of Chemical Industry, Mr. Hake, a gentleman who visited Nevada some years ago on behalf of an English Syndicate which was then thinking of acquiring some of the borax deposits in the South-west of the United States, gave an interesting account of the production of borax in that part of the world, and the evening was further rendered instructive by the communication of some of Mr. Arthur Robottom's racy reminiscences concerning Jim Bridger, the Searles, and other worthies of the borax region in the early days, when Mr. Robottom's object in braving the hardships of Nevada travelling was thought by the unsophisticated settlers in that neighbourhood to lie in his being afraid of the Sheriff, or on the wrong side with the other sex. Mr. David Howard heaved a sigh over the pleasant times when borax sold at 90s. per cwt., and regretted that it was now worth less than one-third of that price, but Mr. Robottom expressed the somewhat obvious truth that the cheapening of borax would prove a great benefit to humanity by increasing its use. So far as the Nevada borax deposits are concerned, they promise, in the immediate future, to remain of an academical rather than of an active commercial interest to European consumers, for, although only a few months ago the borax market was considerably disturbed by singular dealings in large quantities of the American article in Liverpool, that interlude was an evanescent speculative manœuvre, and not a regular commercial incident, and at the present time we believe that North American borax has ceased to compete to any large extent in the European markets, though the American home industry is mainly restricted to its use on account of the high duty which is maintained by the Republic against foreign competitors, and by a sort of understanding which regulates international competition. The low prices of the last few years have told heavily against the American borax industry, and several lakes have ceased to be worked altogether, while it is not so very long ago that financial disaster overtook the "boss" of the American borax-producers, though now we believe his firm has again commenced its operations. The difficulties in the way of sending the Nevada borax to the Pacific ports are so great that they will probably continue to operate against any forwarding of regular and remunerative supplies from that quarter until the article shall again have risen to a price far in excess of its present market value, and just now there does not seem to be any very brilliant prospect of such a rise. A material which has to be carried, ten tons at a time, on a lumbering cart drawn by

twenty-five mules, over about 200 miles of rugged country, to reach the nearest seaport, is at very great disadvantage, apart from even considerations of quality, with one which can be shipped so much more easily, as that obtained by the Chilian deposits, of which large supplies arrive almost every week at Liverpool from Autofagasta, and the boracite from Asia Minor, which, though the youngest regular source of supply, is now, we believe, the principal material used by the borax-refiners in England, Scotland, and France. Then there are the Tuscan borax lagoons at Maremma, which yield large quantities of boracic acid, used both in this country and abroad, and finally there would be, in case of need, the Indian tincal, the oldest of all known borates, to fall back upon. It will therefore be seen that the available supply of raw material for the borax industry is so very great, and could be drawn from so many different parts of the world, that no scarcity is likely to arise within measurable distance, and an agreement among the borax-refiners to revert to anything like the usual prices of former years would probably miss the elements of lasting success.

Mr. Howard mentioned that not so many years ago his firm were selling the refined product at 90s. per cwt. He might have gone further and reminded his audience that in 1873 the makers' price stood as high as 105s. per cwt., though about half of that has been the usual average until a few years ago. At the time when prices stood at the maximum figure referred to, the two English brands then in the market practically dominated the field, but, gradually, the American borax deposits, which had been worked to some slight extent since the end of the sixties, began to compete, a Glasgow chemical works commenced to take up borax-refining, and the price came rapidly down to so low a level that the American shipments no longer paid their consignors. Then the Turkish boracite mines began to be worked on a large scale, and German competition in the refined article made itself felt to an increasingly inconvenient extent year by year. Since then the British makers have acted to some degree, we believe, in concert with one another, and a few years ago the German refiners also formed a combination among themselves. But as the raw material is very cheap, and the only chance of popularising borax to the extent dreamed of by Mr. Robottom seems to lie in keeping its price down to the lowest figure consistent with a fair working profit, the refiners, one would think, would not be acting wisely in attempting to force prices much above their present range. They have to contend, moreover, with another difficulty, viz., the largeness of the stock of borax in the hands of makers outside the combination, and of second-hand holders, speculators for the most part, who are generally able to undersell the manufacturers. The medicinal use of borax is small compared to the employment which it finds in the arts, principally for glazing pottery, in the manufacture of soft goods, and for household purposes. We should think that a continued cheapness of the article must facilitate its introduction in other branches of industry where it has not at present been employed. Some time ago efforts were being made to find an outlet for boracic acid as a fish preservative, but that particular use does not seem to have been very successful. So long, however, as Mr. Robottom maintains his interest in popularising the article we may be certain that no opportunity will be neglected of enlightening the world of its advantages, for that gentleman is always casting about for some new use to which to put his pet article. The absence of one thing in his remarks at the close of Monday's lecture surprised us considerably, viz., the lack of any reference to the famous preserved horse which first drew his attention to the antiseptic properties of borax. By what mischance the noble steed's corpse failed on Monday

night to revisit the glimpses of the moon we cannot conjecture, but at any rate he has not died in vain, and will certainly take his niche, along with his wooden brother of Troy, with Rosinante, Pegasus, Bucephalus, and the rest, down to the famous black charger of modern French politics, in any pantheon for the great horses of history. "Aux grands chevaux, les raconteurs réconnaissants."

TINCTURE CONSTANTS FOR PUBLIC ANALYSTS.

THE publication in this journal of the series of papers on "Tinctures," by Mr. F. W. Fletcher, early this year, and just at the time when the Excise authorities had very fully satisfied the demands of the trade in reference to drawback on tinctures exported, was regarded by many wholesale manufacturers as exceedingly opportune, and we believe that the tables of specific gravities and residues formulated by Mr. Fletcher are now in constant use by manufacturers. The tables have been verified in practice, but no public criticism of them has appeared. An opportunity for this is presented in the current number of the *Analyst*, which contains a paper by Mr. J. Spilsbury, of Leamington, on the "Estimation of Extractive and Specific Gravities in Official Tinctures." We are naturally jealous of anything of direct pharmaceutical interest which appears in the organ of the Society of Public Analysts, as it is not improbable—indeed experience has shown that it is possible—for chemists and druggists to be judged by the standards set up therein. Mr. Spilsbury's figures, therefore, merit criticism. He is a pharmaceutical chemist, and tells us that the figures are averages based on estimations extending over a period of ten years, the tinctures from which the samples were taken "having been manufactured, under his personal supervision, from fine specimens of crude drugs (not specially selected samples), and strictly in conformity with the formulæ of the British Pharmacopœia." The evaporations were conducted in thin porcelain basins of about 2½ inches in diameter, with the exception of some rectified tinctures which had a tendency to creep over the sides, in which cases glass beakers of about 2 oz. capacity were substituted. The respective residues were exposed on the water-bath to a temperature of 212° F., and weighed at the expiration of two hours. Mr. Fletcher conducted his evaporations at 45° to 50° C., and 120° C., in a current of warm air. This is the only respect in which his figures differ from Mr. Spilsbury's. As it is now very generally admitted that the temperature of a water-bath never reaches 212° F., it is an open question whether the figures at 45° to 50° C., or 120° C., are the better comparable with those obtained at the temperature of a water-bath, but we have selected the higher in this instance. We observe that Mr. Spilsbury's table includes fifty-six tinctures, being seven more than Mr. Fletcher's. These seven are:—

Tr. aurantii recent.	2.56 per cent., residue at w. b. temperature, s.g.	'894
„ cannabis ..	43 „ „ „	'846
„ guaiaci ..	13.92 „ „ „	'939
„ lobelia æther...	1.05 „ „ „	'824
„ quinine ..	5.32 „ „ „	'939
„ sabine ..	2.35 „ „ „	'933
„ veratri viridis..	1.89 „ „ „	'847

Of the forty-nine remaining tinctures Mr. Spilsbury's specific gravities are within Mr. Fletcher's limit ('005) in twenty-six cases, so that they practically agree, and in twenty-three cases the specific gravities are '005 or more higher or lower. Several of the discrepancies are so very far out that close examination is not uncalled for. For example, Mr. Spilsbury gives the specific gravity of tincture of cinnamon as '928, Mr. Fletcher gave it as '846. The higher figure is '008 above the specific gravity of proof spirit, the latter

the same above rectified spirit. The tincture is made with '838 spirit. Obviously, therefore, Mr. Spilsbury has made his tincture with a non-official menstruum. The same applies to tincture of senna, given as sp. gr. '893, the menstruum being '920; serpentary, '911, the menstruum being '920; and sumbul, '931, the menstruum being '838. As straws show how the wind blows, errors create want of confidence in chemists' results. In most instances in which Mr. Spilsbury's specific gravities are the higher, his larger yields of extractive are apparently the cause of this. For example, his squill tincture had a specific gravity of '953, Mr. Fletcher's only '937, but the former yielded 8.78 per cent. of extractive, and the latter 2.5 per cent. We have no hesitation in this case in condemning the new figure, for the simple reason that it indicates that squill contains almost 80 per cent. of extractive matter!—an obvious error. In the case of pellitory and stramonium tinctures Mr. Fletcher's extractive is higher and his specific gravities lower than Mr. Spilsbury's, so that one of them must be wrong. We find an allied discrepancy on the opposite side in regard to tinctures of cardamoms and nux vomica, Mr. Fletcher's specific gravities being higher, and his extractive percentages lower than Mr. Spilsbury's. It is unnecessary to seek for an explanation of these discrepancies in the figures themselves. They may arise naturally from the use of different drugs, or they may be due to the use of improper menstrua. In certain instances Mr. Spilsbury has undoubtedly erred in the latter respect, and as he appears to attach some weight to his extractive figures, by stating that the inference to be deduced from them is that "they should not vary from the average amount in the proportion of more than '01 gramme for every '5 gramme yielded, 10 c.c. being used for evaporation," we may well ask some corroborative evidence of the accuracy of his results, especially as they have been submitted for the approval of public analysts.

At the Pharmaceutical Conference meeting two years ago Mr. Siebold called attention to the fact that the logwood generally used by druggists is the fermented article, which the wording of the Pharmacopœia does not contemplate. He urged that the unfermented wood should be used, because it makes better-looking and more astringent preparations. Bruehl, an American authority, now states that the old logwood does not yield as fast colours as fresh wood does. After testing samples of wood oxidised in several different ways, he found the unoxidised wood to give colours superior in their power of resisting exposure to light as well as to washing and the action of chlorine. In face of this fact the only reason for using old wood seems to be that for most of the uses to which logwood is put it is necessary to have clear decoctions, and it is easier to get a decoction from aged than from fresh logwood, and the decoctions, too, look stronger, even if they are not really so. For some classes of goods—blacks—a decoction is by no means necessary, and the wood may be used direct in the dye-bath with much more satisfactory results than if a decoction were used; the colour obtained would be more solid and fast; the wood could easily be brushed off the goods after dyeing.

THE ROYAL SOCIETY.—The following is the list of names recommended by the President and Council of the Royal Society for election into the Council for the year 1890 at the forthcoming anniversary meeting on November 30:—President, Sir G. G. Stokes, D.C.L.; treasurer, John Evans, D.C.L.; secretaries, Professor M. Foster and the Lord Rayleigh; foreign secretary, Dr. Archibald Geikie; other members of the Council—Professor H. E. Armstrong, Professor W. E. Ayrton, C. B. Clarke, M.A., Professor W. Boyd Dawkins, E. E. Klein, M.D., Professor E. Ray Lankester, Hugo Müller, Ph.D., Professor A. Newton, Captain Andrew Noble, C.B., Rev. Stephen J. Perry, D.Sc., Sir H. E. Roseoe, E. J. Routh, D.Sc., W. Scovell Savory, Professor J. J. Thomson, Professor A. W. Williamson, LL.D., Sir C. W. Wilson, Col. R.E.

NEDERLANDSCHE PHARMACOPÉE.

THIRD EDITION, 1839.

THE revised edition of this Pharmacopœia has been published this week. As mentioned on another page, the Commission has been at work upon it during the past five years, and the result of their labours does them credit. We propose in this and subsequent articles to give extracts from the Pharmacopœia, adding, where necessary, such comment and criticism as may seem to be desirable. The present article, and the one following, will deal with the

PHARMACY OF THE PHARMACOPŒIA.

This is fairly well up to date, and is greatly in advance of the last edition, published in 1871. The colour and general characteristics, such as taste and odour, of liquid galenical preparations are generally described; in the case of tinctures the specific gravities are given. Any extended comparison of the Pharmacopœia formulæ with the old formulæ, or with those of other pharmacopœias, would only take up space for no needful purpose: it will suffice to note that galenical preparations are made as far as possible on the decimal principle; the quantities given are, with a few exceptions, such as in Bland's pills, parts by weight (both for solids and liquids); the "water" of the Pharmacopœia is distilled water (*gedestilleerd water*); temperature is denoted by Celsius degrees. the temperatures of *maceration* being 15°-25°, of *digestion* 35°-45°, and of *infusion* 90°-98°. In volumetric estimations the metric system of weights and measures is to be used. There are certain conditions laid down in regard to weighing which will be referred to under Chemistry.

Aque Aromaticæ.

The Pharmacopœia stipulates for the first time that these should have the pronounced odour and taste of the substance from which they are made, should not be slimy, nor should they be affected by sulphuretted hydrogen.

Aqua Rosarum.

This is directed to be made by mixing 4 parts of a filtered solution of 1 part otto in 19 of rectified spirit with 996 parts of water. The strength of the water is therefore 1 in 5,000, which is ridiculously low.

Capsulæ Gelatinosæ.

The Dutch Pharmacopœia is the first to recognise this mode of concealing the taste and disagreeable odour of medicines. There are three different strengths of the gelatine composition ordered, viz.:—

I.						Parts
Gelatine	..	..	..	..	..	1
Water	..	..	..	..	..	2

For ether and tar capsules.

II.						Parts
Gelatine	..	..	..	..	..	3
Water	..	..	..	..	..	6
Glycerine	..	..	..	..	..	1

For ethereal oils and ether-extract capsules.

III.						Parts
Gelatine	..	..	..	..	..	1
Water	..	..	..	..	..	2
Glycerine	..	..	..	..	..	2

For the majority of capsules, such, for example, as those to contain castor oil and cod-liver oil.

The Pharmacopœia describes briefly how capsules are made. The method is exactly the same as that given in "The Art of Dispensing."

Capsulæ cum Balsamo Copaivæ.

No. II. mass is to be used for these, and each capsule should contain 0.5 gramme of copaiba.

Charta Antasthmatica.

Belladonna leaves	
Digitalis	"
Sage	"
Stramonium	.. ; of each 1 part.

Cut these fine and *infuse* in 40 parts of water in which 6 parts of potassium nitrate is dissolved. After filtration, ordinary filtering paper is saturated in the infusion and dried. It is then uniformly sprinkled with the following mixture:—

	Parts
Tincture of benzoin (1 in 5)	.. .. 1
Rectified spirit	.. .. 4

After drying, the paper is to be cut into pieces 10 cm. by 15 cm.

This is an emendation of the old formula, and simply contains 8 parts of water less.

Charta Sinapizata.

This is a new preparation, and is made by treating any quantity of black mustard-seed in a percolator with petroleum ether to remove the fixed oil; then drying at a temperature not exceeding 30° C. and reducing to B 30 powder. Mix some of this powder with three times its weight of a clear solution of guttapercha in chloroform (1 in 10), and spread it evenly over thick vellum paper. Then sprinkle it with more of the same powder and smooth the surface. When dry, the paper is to be cut into pieces 8 by 12 centimetres, each of which should weigh, without the paper, at least 1.5 gramme.

Decoctions.

Unless in the undernoted cases the strength of decoctions should be 1 part of the drug to 10 of the decoction. The drugs should be brought to a proper state of division by cutting, or may be coarsely powdered. The strength of Irish moss decoction is 1½ part, of linseed 3 parts, of cinchona and Iceland moss 6 parts, and rye 8 parts to 100 of decoction.

Electuaries.

We note that the kino has been omitted from the catechu confection, and coriander and cassia from confection of senna. The latter is now composed solely of prunes (150), tamarinds (150), senna (50), and syrup (200). It is brought down by evaporation to 500 parts.

Emulsions.

Seed emulsions are made of 15 per cent. strength. For emulsifying fixed oils a third of their weight of powdered gum arabic is used.

Extractum Chinæ Liquidum.

The Pharmacopœia fittingly introduces fluid extracts into official Dutch pharmacy by adopting a modification of Dr. de Vrij's process for the preparation of this fluid extract. The formula is as follows:—

	Parts
Powdered red bark	.. .. 100
Dilute hydrochloric acid	.. .. 12
Glycerine	.. .. 20
Water	.. .. a sufficiency

Mix the bark with four times its weight of water, and the acid and glycerine, and macerate for 24 hours. Then pack in a percolator, and, when the liquid ceases to pass, add more water, and continue to percolate until 2 drops of the fluid cease to give a precipitate with 4 drops of sodium carbonate solution. Then evaporate the percolate on a water-bath, at a temperature not exceeding 80°, until it weighs 90 parts; to this add 10 parts of rectified spirit.

The extract is described as a reddish-brown liquid, which mixes clear with five times its weight of water, or is so with the addition of a few drops of dilute hydrochloric acid. Other characteristics are noted, and the extract is directed to be assayed by mixing 5 grammes with 40 grammes of water, and rendering the mixture distinctly alkaline with soda solution. The alkaloids are then washed out with chloroform, first 20 c.c., then 10 c.c., and more if necessary. On evaporation the chloroform should leave a residue weighing 0.2 to 0.225 gramme, being the equivalent of 4 to 4.5 per cent. of alkaloids.

Extractum Hydrastis Liquidum.

This is a 1 in 1 extract made by percolating the B 30 powder with proof spirit. It is set aside for 4 weeks before it is

filtered. Tests are given. In this and other cases we may note that the number of the powder to be used is prescribed.

Extractum Opii.

Made from powdered opium by double maceration with water. The liquors are evaporated to dryness. The extract should form a clear solution with water, and should yield when assayed by the process given, which is similar to that of the British Pharmacopœia, at least 18 per cent. of morphine.

It is obvious that there will be even greater difficulty in obtaining this extract than there is in getting one from genuine opium, which will correspond to the British Pharmacopœia demands.

Extractum Physostigmatis.

This extract is directed to be made by percolating B 10 powder of the bean with rectified spirit until 10 drops of the percolate evaporated on a water-bath cease to give a coloration with 20 drops of ammonia solution. The percolate is then evaporated at a temperature not exceeding 60° to the consistence of a soft extract. 5 parts of glycerine being added to every 100 parts, and further evaporated to 100 parts. A qualitative test is given.

This is a slight improvement upon the method formerly adopted in Holland; the glycerine is useful, and the ammonia test is a good idea. But we would point out that rectified spirit does not exhaust calabar bean. It would need the addition of 20 per cent. of water before it could do that. Glycerine is used in several other cases for the purpose of preserving the extracts in a soft condition. Advantage has been taken of an English improvement in the preparation of

Extractum Strychni.

The menstruum in this case is dilute spirit (sp. gr. .887 to .892). Percolation is employed until the percolate ceases to give the hucine reaction, then it is evaporated to dryness. In this condition it is expected to contain 15 per cent. of mixed alkaloids, a thing which, in nine cases out of ten, will be simply impossible, so that the proviso whereby it may be attenuated with milk-sugar is very necessary. The way in which the alkaloids are estimated is expeditious, and may be quoted. One gramme of the extract is treated with 10 c.c. of water and 2 c.c. of dilute sulphuric acid, warmed (whereby resin and fat are thoroughly separated), filtered, alkalised with soda, and washed with chloroform (20 c.c. and 10 c.c.), the washings being evaporated and dried at 100° C.

Glycerinum cum Tragacantha.

It is strange to see Proctor's excipient in Dutch; but the formula is modified here. It is 1 of tragacanth and 9 of glycerine, mixed, and allowed to stand for twenty-four hours. Used as a pill excipient.

Gossypia.

A new series of antiseptic cottons are introduced. They are all made from absorbent cotton, which also appears in the Pharmacopœia for the first time. We give the directions as briefly as possible for preparing the antiseptic wools.

Ferric Chloride or Styptic.—Absorbent cotton, 75; ferric chloride solution (neutral, sp. gr. 1.441-1.448), 60; rectified spirit, 75. Spread out the cotton and sprinkle it uniformly with the liquids previously mixed. Then pack in a closed bottle and leave it so for a day, until the solution has equally soaked throughout; then dry at a temperature not exceeding 40°, until the whole weighs 100 parts. The cotton contains 25 per cent. of anhydrous ferric chloride. It should be kept in a closed vessel.

Sublimate Cotton.—Take 379 parts of absorbent cotton, spread it out and sprinkle upon it a solution of 1 part of corrosive sublimate and 20 parts of liquid paraffin in 400 parts of ether. Keep for a day in a stoppered bottle, then dry. The final weight of the cotton should be 400 parts. It contains 0.25 per cent. of corrosive sublimate.

Iodine Cotton.—Ninety parts of cotton are heated to a temperature of 80° in a stoppered bottle with the stopper out, while in this 10 parts of iodine, wrapped in a piece of filtering-paper, are introduced, and the heat continued until the iodine has thoroughly impregnated the wool.

Iodoform Cotton.—Cotton, 90 parts; iodoform, 5 parts; liquid paraffin, 5 parts; ether, 90 parts. To make 100 parts of iodoform cotton in the same manner as sublimate cotton.

Phenol or Carbolic Cotton.—Absorbent cotton, 93 parts; phenol, 2 parts; liquid paraffin, 5 parts; ether, 100 parts. To be made in the same manner as iodoform cotton. Product should weigh 100 parts.

Granula.

This is a class of preparations new to the Pharmacopœia. There is no specific formula, the general directions being to add 1 part of the active drug to a mass composed of sugar of milk, 30 parts; gum arabic, 15 parts; and syrup to make a mass. The granules, if no other strength is prescribed, should contain 1 milligramme of the active ingredient in 50 milligrammes, and should be rolled in powdered milk sugar.

Infusa.

There is little of interest to note under this heading. Generally infusions are to be made 1 in 10, except ipecacuanha and digitalis (1 in 200), and arnica and senna (1 in 20). In compound senna infusion glycerine takes the place of manna, which has been omitted from the Pharmacopœia.

Linimentum Ammoniae.

This is the only representative of its class. It is made with olive oil, 4 parts; ammonia solution, 1 part. It is new. We wonder why the Dutch have so little regard for liniments?

Mucilago Tragacanthæ

used to be made 1 in 12 of water. An intractable paste, therefore. Now it is to be made 1 in 50, which is better.

Nitris Æthylicus cum Spiritu.

This is the lengthy name for sweet spirit of nitre. A change has been made in the process. Now 90 parts are distilled from a mixture of 100 parts of spirit and 23 of nitric acid. The distillate is treated with 1 part of calcined magnesia and redistilled. A solution of soda was formerly employed in place of the magnesia, and must have weakened the spirit considerably. The permanent advantage of magnesia even is questionable. Sp. gr., 0.840-0.850. The spirit is now tested qualitatively with ferrous sulphate. An iodoform test is also given, which is a new one for the spirit. 5 c.c. of the spirit are mixed with 10 c.c. of ammonia, and to this are added 2 c.c. of a solution of iodine 1 part, and potassium iodide 2 parts, in 17 of water. After the black precipitate formed is dissolved, a further addition of 2 c.c. of the iodine solution should not, in half an hour, cause the separation of iodoform crystals.

Oleum Jecoris Aselli Ferratum.

One part of benzoate of iron is dissolved at a temperature of 30° in 99 parts of cod-liver oil.

Ol. Jecoris Asel. c. Iod. Ferroso.

	Parts
Iodine	5
Cod-liver oil	394
Iron filings	10

Dissolve the iodine in the oil, then add the iron, and if after the end of 24 hours, the oil being occasionally agitated, it should retain a violet colour add a little more iron. The oil contains 1.5 per cent. of ferrous iodide.

Pilulæ Blaudii.

Several Continental pharmacists having recently communicated formulæ for these pills, it may be useful to quote here the formula which the Commission have agreed upon, viz. :—

	Grammes
Dried sulphate of iron	8
Glycerine of tragacanth	4
Carbonate of potash	6.5
Calcined magnesia	1

Mix the sulphate of iron with the glycerine of tragacanth, then add the other ingredients, make a mass, and divide into 100 pills, which may be rolled in starch-powder or silvered.

Two other new pills are given, laxative and quinine. Both may be coated as above. Blanchard's pills have, as formerly, to be coated with an ethereal solution of tolu.

Powders.

Very precise directions are given regarding the powdering of drugs. Those which do not contain volatile matter have first to be dried at 50°, but those of an aromatic nature should not be exposed to a temperature exceeding 30°.

Coarse powders are of three degrees, A 1.5, A 3, and A 5, the figures indicating the diameter in millimetres of the circular sieve-holes.

Fine Powders.—The figures in this instance represent the number of meshes in a linear centimetre. No B 10 powders are named. B 20 are anise fruit, cina flowers, cubebs, and fennel fruit. B 30, althaea root, gum arabic, catechu, liquorice juice, ginger, gentian, elecampane, calamus, cinnamon, cinchona, lactucarium, medicinal soap, milk-sugar, ergot, myrrh, opium, orange-peel, cantharides, nux vomica, sugar, valerian, extract of liquorice, salts, and acids. B 40, digitalis, ipecacuanha, jalap, rhubarb, salep, senna, and tragacanth.

When powdered drugs are ordered for preparations without mention of any degree it is understood that the foregoing are to be taken. But in the preparation of tinctures we find that much coarser powders are ordered. That, however, will be referred to under the proper heading.

The only novelty in compound powders is Prussian powder.

Syrupi.

There is nothing new under this heading. The active ingredients of all of the syrups, except that of ferrous iodide, are of vegetable origin.

Solutiones.

We note slight alterations in the strength of some solutions. Spirit of camphor, for instance, is now 1 in 10 instead of 1 in 13. The strength of Fowler's solution is determined in a similar way to the B. P. method. *Solutio ferri albuminata* is new; so also is

Solutio Nitroglycerini.

The process adopted is Dr. Vrij's, and is as follows:—

Nitric acid (s.g. 1.460—1.480)	..	..	25 c.c.
Sulphuric acid	..	..	25 c.c.
Glycerine	..	..	1 gramme

Mix the acids, and add gradually by drops the glycerine, ensuring that the temperature of the mixture does not exceed 30°. When the action ceases add 30 c.c. of water, and set aside to allow the nitroglycerine to settle. Pour off the water, and wash the nitroglycerine with more water, finally drying it with filtering-paper, and dissolving in 99 times its weight of rectified spirit.

ESSENCE OF SENNA PODS.

By C. SYMES, Ph.D.

(Read at a meeting of the Liverpool Chemists' Association held on November 7, 1889.)

NOWADAYS, when, like the Athenians of old, we are constantly looking for something new, it is rather gratifying to recognise the reintroduction of a drug which can claim antiquity as one of its virtues. Not only were senna pods known, but their properties were recognised, a century or two ago; but as far as I can gather they have not been popular at any period until quite lately.

Dr. Keith, after giving them an extended trial, recommended them to Dr. Macfarlan, who, on gaining experience of their utility as an aperient, contributed a note on the subject which was published in the *Lancet* of July 27 last. Soon after this a parcel which had lain on our shelves undisturbed for nearly twelve months was brought into use on a few ounces of a concentrated infusion being applied for. This small quantity was prepared by the evaporation of an infusion in the way mentioned subsequently by Mr. E. H. Salmon in the *Pharmaceutical Journal* of October 12, p. 281. This produced a dark liquid possessing scarcely any odour or taste, and in no way reminded me of its relation to senna leaves. I should perhaps have agreed with Mr. Salmon that it was tasteless; but recently a customer mentioned that after taking "tasteless castor oil," "tasteless cod-liver oil," and "tasteless

cascara sagrada," he had come to the conclusion that a chemist's notion of the meaning of "tasteless" was a rather extraordinary one, and differed widely from that of the public generally. This was fairly efficient as an aperient, but as it scarcely came up to expectations a larger quantity was prepared, to meet a growing demand, in what I regard as a more rational manner. Mr. Groves long since determined that the activity of senna leaves depended on the presence of a compound of cathartic acid with calcium and magnesium, and that this was injured by continued heating. The active agent being cathartin in senna pods also, it was evident that to obtain the best results extraction by pressure, as advocated by Mr. E. W. Bell in *THE CHEMIST AND DRUGGIST*, October 6, p. 609, must be adopted. Mr. Bell's proposal is in fact all that can be desired, but experience on several batches convinces me that he does not completely exhaust the leaves, and that the resultant fluid extract is not a true valoid.

In other words, the 16 ounces of finished essence does not in my experience fully represent the activity of the pound of pods operated on. No doubt the evaporation method tends to produce the more nearly tasteless preparation, but this will depend to some extent on whether the pods are old and brown or new and green. Nearly all the supply at present is fairly old, for the demand until recently has been exceedingly small; but that it has grown considerably will be evident from the fact that the stock offering on the London market, October 10, was from 15 to 20 bales, whereas a fortnight later, as far as could be ascertained, this had all been bought up, and there was not a bale remaining in first hands. If the pods have been all well preserved they contain a small quantity of oleo-resin and wax, which is readily extracted by ether (as sample now shown). Dr. James wrote in 1752: "The fruit or follicles of the senna tree are less active than the leaves," and this is supported by some opinions at the present day; but Mr. Salmon found those he examined to contain 2½ per cent. of cathartin as compared with 2 per cent. only in the leaves. But he does not say if this substance was purified further than by precipitation with alcohol; if not, it may contain some little mucilaginous and albuminous matter. Two samples of pods examined by myself contained 0.72 and 0.8 per cent. of pure cathartic acid, obtained by precipitating a fluid extract with an equal bulk of absolute alcohol; the liquid filtered from the precipitated mucilage and salts was mixed with more absolute alcohol, as long as a precipitate was produced. This precipitate washed with alcohol, dissolved in a little water, freed from albumen by a few drops of hydrochloric acid, and the filtrate completely precipitated by the addition of more hydrochloric acid; the impure cathartic acid thus obtained was purified by dissolving in 60 per cent. alcohol and precipitating by ether. My object has not been to make an exhaustive inquiry into the relative merits of senna leaves and pods, but to propound on a knowledge of the foregoing what appears to me a rational formula for the fluid extract or essence.

Although hydraulic pressure is undoubtedly the best for the purpose, a good screw-press answers fairly well, and the "Enterprise" press still better. Operating then on 1 lb. of pods, the form I would suggest is as follows:—

Senna pods, slightly bruised	..	..	1 lb.
Rectified spirit	..	..	5 oz.
Distilled water	..	..	12 oz.

Press the pods well down in the containing vessel and pour on the mixed spirit and water; in twenty-four hours reverse the position of the pods and allow to stand a further period of four or five hours, subject to strong pressure; set aside the liquid in a bottle, break up the marc, and pour on them the following previously mixed:—

Glycerine	..	..	1 oz.
Liquid ammonia	..	..	20 minims
Distilled water	..	..	19 oz.

Allow to stand four hours, press strongly, strain and evaporate the liquid so obtained, until when well mixed with the first liquor and filtered 16 fluid ounces will be produced. The addition of one drop each of oil of caraway and essence of almonds, with two drops of essence of lemon, makes it really palatable. The medium adult dose is one fluid drachm.



The following applications for Patents have been registered at the Patent office.

Ammoniated Soaps.—11,817.—July 25, 1889.—C. R. Huxley.

Ammonium-nitrate.—12,451.—August 6, 1889.—A. W. Wahlenberg and J. A. Wahlenberg. Improved process of producing.

Astringent Enema Syringe.—11,871.—July 26, 1889.—C. J. Deane (Sister Rona).

Beverages.—12,163.—July 31, 1889.—R. W. Anderson. Improvements in aerated and other.

Blood Pill.—13,769.—August 31, 1889.—T. Cavill.

Capsules.—12,032.—July 29, 1889.—P. Bruch. Machines for making.

Colouring Poisonous Substances.—14,327.—September 11, 1889.—A. H. Allen.

Compound Wax.—12,992.—August 17, 1889.—G. L. Alemand.

Dental.—12,715.—August 13, 1889.—D. M. Small. Improved device for introducing a heated product into the cavity of a tooth.—12,862.—August 14, 1889.—C. F. W. Frantzen. Instrument for facilitating dental operations.—13,048.—August 19, 1889.—J. Rhodes. The manufacture of the mineral artificial button-teeth; the button is for securing the teeth in vulcanite.

Disinfecting Compound.—14,032.—September 5, 1889.—J. G. Flower and D. W. Macdonald.

Dithio-salicylic Acid.—13,027.—August 17, 1889.—A. M. Clark. Separation of the isomeric substances produced in the manufacture of.

Drip of Bottles.—12,597.—August 9, 1889.—C. I. C. Bailey. Stopping the drip from the mouths of bottles from unning down the sides.

Dry Flour Paste.—14,214.—September 9, 1889.—J. H. Day.

Electro-therapeutic Cap.—13,344.—August 24, 1889.—W. P. Thompson.

Embrocation.—14,742.—September 18, 1889.—V. Edwards. For the cure of neuralgia, gout, rheumatism, &c.

Expectoration Cups.—11,870.—July 26, 1889.—C. J. Deane (Sister Rona). Antiseptic linings for.

Facilitating Chemical Reactions.—13,549.—August 27, 1889.—H. Bower. Process for.

Feeding-bottles.—12,859.—August 14, 1889.—S. D. Waddy. A case for.

Furniture Polish.—14,479.—September 13, 1889.—J. Hanson.

Hydrophobine.—14,605.—September 17, 1889.—J. R. Hartley. Remedy to prevent hydrophobia.

Japanese Magic Soap.—12,259.—August 2, 1889.—E. Howell. For polishing furniture, glass, &c.

Linseed Mucilage.—13,535.—August 27, 1889.—A. Bossé. For toilet and other purposes.

Medical Plaster.—12,701.—August 12, 1889.—A. E. Jones.

Ointment.—13,775.—August 31, 1889.—F. A. Kirke, M. Wright, and R. R. Lousada. For the treatment of horses' hoofs.

Preserving Milk.—12,614.—August 9, 1889.—C. W. Beesly and H. S. Holt. Improved compound for.

Primary Battery Solution.—14,551.—September 16, 1889.—H. A. Henderson.

Protective Respirator.—14,727.—September 18, 1889.—J. Burch.

Razor-paste.—13,476.—August 27, 1889.—F. Grant. Improvements in razor strops and paste.

Rheobathometers.—13,477.—August 27, 1889.—H. Flad.

Sealing-wax.—12,034.—July 29, 1889.—H. Bedford. Manufacture of.

Sheep-dips.—13,674.—August 30, 1889.—R. Angus and G. Craig.

Specific for Restoring Hair.—13,509.—August 27, 1889.—G. Beston.

Surgical Bandages.—12,848.—August 14, 1889.—W. Hillman. Apparatus for rolling.—13,885.—September 3, 1889.—G. Dean.

Tapeworm Pills.—14,055.—September 6, 1889.—T. Cavill.

Toilet Preparation.—11,455.—July 17, 1889.—D. C. Mackenzie.

Truss.—10,922.—July 6, 1839.—W. Carter.—12,002.—July 29, 1889.—V. Fischer.

Uterine Syringes.—12,108.—July 30, 1889.—J. W. Kirkwood and O. M. E. Bartsch.

Varicose Legging.—10,524.—June 29, 1889.—H. Fisher.

Waterproof Fabric.—13,588.—August 28, 1889.—E. G. Hughes. For surgical or curative purposes.

Writing Inks.—14,388.—September 12, 1889.—R. Ashton. Preparing colours for.

Specifications recently published.

1888.

6,130. Sando. Lotion for foot-rot in sheep. 4*d*.

6,753. Atkins & Atkins. Filtering apparatus. 1*s*. 6*d*.

11,479. Parker & Robinson. Iodine. 4*d*.

12,236. Werber & Hendry. Rectifying acetic acid, &c. 8*d*.

12,276. Van Bylevelt. Medicated grain cakes for horses, &c. 4*d*.

12,484. Howcroft. Beverage. 4*d*.

12,766. Gear. Dental rubber. 4*d*.

12,863. Smith. Infants' food warmer, &c. 6*d*.

13,007. Hipwell & Hofmann. Enamel for casks, &c. 4*d*.

13,169. Kolbe. Salols, &c. 6*d*.

13,724. Brin's Oxygen Company. Treating spirits, wines, &c. 4*d*.

14,281. Hooker. Inhalers. 8*d*.

14,328. Shears & Manbré. Vinegar. 6*d*.

14,333. Cannon. Acetic acid. 6*d*.

14,457. Doyle. Marking ink. 4*d*.

14,761. Brown. Softening water. 8*d*.

15,004. Reihlen. Effervescent liquids, &c. 8*d*.

15,124. Brunner. Purifying glycerine. 4*d*.

15,558. Foulsham. Soap-powder. 4*d*.

1889.

1,344. Taylor. Liver complaint mixture. 4*d*.

2,080. Lake. Medical electric apparatus. 8*d*.

5,984. Hannan. Sanitary preparations. 4*d*.

6,740. Sutcliffe. Nipple shell. 6*d*.

6,801. Haussmann and others. Syringes. 8*d*.

7,814. Wood & Wood. Abdominal belt. 6*d*.

8,971. Mills. Sanitary inks. 4*d*.

10,112. Schott. Surgical instruments. 6*d*.

10,203. Warrick. Sampling perfumes, &c. 4*d*.

10,686. Haddan. Triturating, &c. substances. 6*d*.

10,765. Keefe. Applying medicated, &c. powders. 6*d*.

10,766. Woodward & King. Label attachments for druggists' bottles, &c. 8*d*.

10,767. Tunbridge & Wright. Fly-paper. 6*d*.

10,951. Wilson & Wood. Fly-papers. 4*d*.

11,721. MacMunn. Destroying insects on trees, &c. 4*d*.

230. Brandon. Extracting lemon-juice, &c. 6*d*.

Trade Report.

Notice to Retail Buyers.—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., November 7.

SINCE our last report business in the departments falling within the scope of our review has much improved. A more than usually good trade is reported in a number of small articles, and some of the leading drugs are exceptionally strong and active. As regards chemicals, we have to state that citric and tartaric acids, the former especially, after a long period of depression, are again moving upwards, while cream of tartar has made quite a strong advance. Cocaine seems rather inclined to be lower, in spite of strong advices concerning the raw material. Camphor and mercurials are dearer. A breakdown has taken place in the price of permanganate of potassium, and sulphate of ammonia is also weaker; but soda ash, chlorate and prussiate of potash, and sulphate of copper are again firmer. The principal business in this section, however, has taken place in quicksilver and quinine, in both cases at an advance. Lead acetate is still rising. In drugs the trade generally are awaiting the auctions which will take place next week, but in the meantime active inquiry has forced up the prices of castor oil, raw camphor, ergot of rye, and jalap, and more money is wanted for fine pod musk, Senegal gum, copaiba balsam, and Calabar beans. China and Japan galls are affected by a strong speculative demand. Cascara sagrada is rather dull and weak. Cinchona sold at higher rates this week, both here and in Amsterdam. In the outside markets shellac remains very quiet, but steady, while gambier is falling away considerably. Cocoa butter sells at a large advance, and rape oil is also dearer. In varnish gums, anise of bean and pea size is worth more money, but Zanzibar sorts are lower, Kauri higher for three-quarters scraped, and dust brings extreme rates, but selected is easier. Batavia damar cheaper. Turmeric, white Penang pepper, and nutmegs are also lower, and spices generally very dull of sale.

WEST AFRICAN CINCHONA.—No less than 206 packages of cinchona grown on the island of San Thomé, in the Gulf of Guinea, West Coast of Africa, were included in this week's auctions. The island of San Thomé is situated almost immediately north of the equator, and is about equidistant from the Niger and the Congo mouths. Among its chief products hitherto have ranked indigo, coconuts, maize, cotton, sugar, &c. San Thomé belongs to the Portuguese, and the bark, in fact, was brought here *via* Lisbon. The cinchona which was offered at yesterday's auction consisted of the accumulated exports of the island received here between January and May. The total weight amounted to 21,920 lbs., containing an aggregate equalling about 7,500 oz. of sulphate of quinine, or just over 2 per cent. on an average. The bark comes all from the same plantation, and at the prices realised we should think that it must leave a slight profit to the enterprising proprietor. It is taken from trees belonging to one of the red varieties, but very pale in colour, and of a remarkably hard texture, very much resembling the old South American Huanoco bark, though it would be unkind to suggest that certain druggists competed for it on that account. It appears in small quills and chips, and is evidently taken from young trees. Unfortunately a large proportion of it was "country damaged." If it had been dried more carefully it would have commanded a rather better price. It was well competed for both by druggists and quinine manufacturers, especially by the English makers, who generally buy cinchona of a comparatively high alkaloidal standard only. The best lots equalled 3.21 per cent. of quinine sulphate, the most ordinary 1.22 per cent.

ACIDS.—Citric acid is decidedly dearer on the spot, there being buyers at 1s. 3½d. per lb., while for forward delivery 1s. 3¼d. is required. Oxalic dull at 4½d. per lb. The price of Tannic acid has been raised 1d. per lb. by some of the makers in sympathy with the advance in galls, but that of Gallic acid remains unaltered at present. Tartaric acid firm at 1s. 2½d. to 1s. 2¾d. on the spot, according to brand, and 1s. 3d. for English make for forward delivery. The advance in tartar materials, which still continues, would appear to warrant higher rates for the article.

AMMONIA SALTS.—Carbonate remains quoted at 3¾d. per lb., and Sal ammoniac, which is very scarce, at 36s. for first and 34s. for second grade. Sulphate quiet, at 12l. for Beekton terms, and 11l. 18s. 9d. for 24-per-cent. London grey; Hull, 11l. 17s. 6d.; Leith, 11l. 16s. 3d.

ANTIMONY.—Regulus firm at 70l.

ARSENIC is firmly held at 13s. 4½d. to 13s. 6d. per cwt. for best white powder in kegs.

BALSAM COPAIBA.—The Liverpool market is hardening, and we hear that 2s. 3d. per lb. was paid for Maranhão some days ago, while holders now require more money, say 2s. 4d. to 2s. 5d. for the best grades.

BENZOL.—Firm at 3s. 2d. to 3s. 3d. for 90-per-cent, and 2s. 4d. for 50-per-cent.

BLEACHING-POWDER.—Market quiet and sales very limited, at 7s. 9d. ex warehouse, and 6s. 6d. to 7s. per cwt. on the Tyne.

BORAX fairly steady, but quiet, at 28s. to 28s. 6d. per cwt. The principal makers, however, maintain their quotation of 30s. to 31s. per cwt. Boracic acid is reported easier in price from Italy, notwithstanding the receipt of some good orders from England recently.

CALABAR BEANS remain in good request, with sales at 8½d. per lb.

CAMPHOR.—The English makers of refined camphor have again advanced their quotations ½d. per lb., Bells being now quoted at 1s. 6d. to 1s. 5½d., according to quantity; tablets, 1s. 5½d. to 1s. 11d., according to size and quantity, and flowers, 1s. 4½d. to 1s. 5½d. per lb.

CAMPHOR (CRUDE).—There has been a good deal of business since our last report, mostly for forward delivery, at a fresh advance in values, about 200 tubs Japan having changed hands on the spot, first at 115s., and afterwards at 120s. per cwt., while at present there is nothing available under 125s. per cwt. For forward delivery about 500 piculs have changed hands, November-December at 107s. 6d., and December-February shipment at 110s., "c.i.f." terms, landed weights. It is thought that next week will see a further advance.

CASCARA SAGRADA.—The price is nominally 70s. per cwt. c.i.f. terms, but we hear, though from a source which can scarcely be called reliable, that 65s. has been accepted this week.

CHAMOMILES.—Nothing new to report.

CINCHONA.—The quantity actually offered at Tuesday's public auctions was rather smaller than what had originally been declared for sale, and consisted of

	Packages	Packages
Ceylon bark	1,654 of which	1,317 were sold
East Indian bark ..	111	99
Java bark	66	66
South American bark	519	339
African West Coast bark	206	206
Total	2,556	2,027

It was generally anticipated previous to the auctions that there would be some improvement in prices, the offerings being so much more moderate than those of the previous auctions, and the news from Ceylon generally favourable. The feature of the auctions was the inclusion of 206 packages of cinchona from the West African Coast, of which we give full particulars elsewhere. A good demand prevailed throughout the sales, and with very fair competition brokers freely met the market, the result being that the decline at the auctions of October 22 was more than recovered on all but the most ordinary parcels. The prices paid were very

irregular, decidedly dearer for good and fine barks, of which an exceptionally large proportion was included in the sales, and about the same as at the previous sales for the inferior and medium grades. The unit is placed at an average of fully $1\frac{1}{2}d.$ per lb., occasionally reaching $2d.$

The following few instances show the prices realised by some parcels:—

		Percentage of quinine sulphate	Price per lb.
18,080 lbs. Ceylon renewed crown chips	..	6	$11\frac{1}{2}d.$
7,140 " " " succirubra shavings	2:5		$5d.$
3,670 " " " " "	3:2		$6\frac{1}{2}d.$
4,550 " " " " "	4:2		$8d.$
11,400 " " original " chips	1:5		$2\frac{1}{2}d.$
6,380 " " renewed " "	2		$4\frac{1}{2}d.$
2,040 " " original officialis " "	1:9		$4d.$
11,640 " " " shavings	2:3		$3\frac{1}{2}d.$
5,070 " " renewed " chips	2:75		$4\frac{1}{2}d.$

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works	108,344
" the American, French, and Italian works	78,631
" the Brunswick factory	68,670
" the Frankfurt o/M. and Stuttgart works	45,806
" the Auerbach factory	32,742
Messrs. Howards & Sons	31,348
Sundry druggists, &c.	25,412
Total quantity sold	390,953
Bought in or withdrawn	131,638
Total amount of bark catalogued	522,591

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original*: Red varieties, weak and small chips, partly mixed with quill, $2d.$ to $3d.$; fine bold bright, mixed with quill, $4\frac{1}{2}d.$ to $5d.$; a few packages very fine, $6d.$ per lb. Spoke shavings, ordinary dull and dark to thin and weak, $1\frac{1}{2}d.$ to $2d.$; fair to fine bright strong, $3d.$ to $4\frac{1}{2}d.$; a few fine, $6\frac{1}{2}d.$; dark and dusty root, $2\frac{1}{2}d.$ to $3d.$; root and chips mixed, $2\frac{1}{2}d.$ to $4d.$ Yellow varieties: Fair chips, mixed with branch quill, $4d.$; fine quilly chips, $6d.$ to $7\frac{1}{2}d.$; fine stoutish broken quill, $8d.$ (damaged, $7d.$ to $7\frac{1}{2}d.$ per lb.). Grey varieties: Ordinary thin branchy mixed chips, $2\frac{1}{2}d.$ to $3d.$; fair to good spoke shavings, $3\frac{1}{2}d.$ to $5d.$; good strong root, $6\frac{1}{2}d.$ per lb. *Renewed*.—Red varieties: Ordinary dull to fair chips, $2\frac{1}{2}d.$ to $3\frac{1}{2}d.$; bright stem chips, mixed with quill, $4d.$ to $5d.$; common dull spoke shavings, $3d.$; good bright, $5d.$ to $6\frac{1}{2}d.$; fine strong, $7\frac{1}{2}d.$ to $8d.$ per lb. Hybrid, fine renewed chips, $9d.$ per lb. Yellow chips, $4d.$ to $4\frac{1}{2}d.$; grey fair chips, $4d.$ to $4\frac{1}{2}d.$; bold chips, mixed with broken quill, $6d.$ to $7d.$; fine bright bold chips, $11d.$ (one lot $11\frac{1}{2}d.$); good strong spoke shavings, $7\frac{1}{2}d.$ —for a fine parcel $1s. 1d.$ is required, an offer of $1s.$ per lb. being refused.

INDIAN BARK.—*Original* red chips, $3d.$ to $3\frac{1}{2}d.$; good to fine ditto, mixed with quill, $4d.$ to $6d.$; fine shavings, $6d.$; dusty root, $3d.$ per lb. Yellow chips, fairly good bright and branchy, $4\frac{1}{2}d.$; fine bold chips, mixed with small broken quill, $7d.$ to $9d.$; good quilly shavings, $6d.$ to $8d.$; good renewed yellow chips, $8d.$; bold ditto, grey spoke shavings, $6\frac{1}{2}d.$ per lb.

JAVA BARK.—Red druggists' quills, good short stout and silvery, $11d.$ per lb.; yellow root, good but dark and dusty, $6d.$; good renewed chips, $6d.$ to $7\frac{1}{2}d.$; grey good strong renewed chips, $8\frac{1}{2}d.$; rich root, $9d.$ per lb.

SOUTH AMERICAN BARK.—A large quantity (412 packages = 60,982 lbs.) of cultivated Bolivian *Calisaya* bark was offered, of which 339 packages, weighing 44,442 lbs., sold at very full prices:—Good strong silvery quill, $9d.$ to $10d.$; broken thin and irregular ditto, $6d.$ to $7\frac{1}{2}d.$; good chips, $5\frac{1}{2}d.$ per lb. A parcel of 107 bales bold but dark *Cartagena* in split quills and flat pieces is held at $7d.$ per lb.

WEST AFRICAN BARK.—Two hundred and six bales of the red bark, rather pale in colour, of good silvery appearance, and very hard, which we have occasionally before received from that quarter, were placed in sale and realised very

good prices; sound thin but good strong druggists' quill, $5d.$ to $7\frac{1}{2}d.$; damaged ditto, $3d.$ to $4\frac{1}{2}d.$; irregular broken quills, mostly damaged, $1\frac{1}{2}d.$ to $4\frac{1}{2}d.$; thin branchy to fine bold chips, $2d.$ to $5\frac{1}{2}d.$; damaged ditto, $1d.$ to $3d.$ per lb.

According to the latest Ceylon news concerning the cinchona syndicate, the representatives of owners of bark in India and Java are being communicated with and asked to co-operate, and Messrs. Darley, Butler & Co., of Colombo, will act as agents for the syndicate which is being formed in Ceylon. The forecast of the exports for the season which commenced on October 1 last ranges from 6,000,000 to 7,500,000 lbs., and the stock of marketable bark on the trees in the plantations, and in store in Colombo, from 15,000,000 to 20,000,000 lbs. The shipments between October 1 and October 10 have been: 1889, 309,968 lbs.; 1888, 282,115 lbs.; 1887, 265,429 lbs. Our imports since last report have been 2,281 packages from all sources.

COCAINE.—Some of the manufacturers who are more or less out of touch with the market have lowered their quotations, and prices now range from $14s.$ to $16s.$ per oz. for bulk, according to brands. Nevertheless it is announced that cables from South America report a fresh rise in the leaves, which is expected soon to make its influence felt.

COCA BUTTER.—At the monthly auctions held on Tuesday 250 2-cwt. cases of *Cadbury's* brand sold at prices ranging from $1s. 4\frac{1}{2}d.$ to $1s. 5\frac{1}{2}d.$ at the beginning, when the competition was very brisk, but gradually falling to $1s. 3\frac{1}{2}d.$ to $1s. 3\frac{3}{4}d.$ The average price was $1s. 4\frac{3}{16}d.$, an advance of $\frac{1}{16}d.$ per lb. on the preceding sale.

COPPER (SULPHATE).—Very scarce on the spot, with a strong demand at $23l. 10s.$ to $24l. 10s.$ December delivery may be bought at $22l. 10s.$

CREAM OF TARTAR.—The strong position of the raw material has caused a further rapid rise in this article. Best white French crystals are to-day generally quoted firm at $100s.$ per cwt., and we understand that $102s.$ per cwt. was paid this afternoon for powder.

CUTCH.—There have been rather heavy arrivals lately, but a large business is said to have been transacted. Particulars, however, are not allowed to transpire.

ERGOT OF RYE.—The demand has considerably improved since the last drug sales, and a fair trade is reported both in good new *Spanish* at $1s. 6d.$ per lb. spot, and in *Russian*. The latter has been dealt in on the spot and for arrival at the equivalent of $1s. 3d.$ for the former position.

GALLS.—*Turkey* remain firm at the recent quotations. In *China* and *Japan* galls there has been a very active speculative business. Cablegrams from China quoted $69s. 6d.$ "c.i.f." for new crop early in the week, but add that there is nothing offering at present. The sales reported embrace about 800 cases, of which 200 on the spot at $70s.$ per cwt., and the rest (partly resales), November to January shipment, at $65s.$ "c.i.f." terms, both for China and Japan galls.

GAMBIER.—The market has declined all round, prices being about $1s. 3d.$ lower for block on the spot, and from $9d.$ to $1s.$ for forward delivery. A rather large supply was sold at auction on Tuesday, partly "without reserve," at a decline of $1s.$ per cwt. on the rates previously current for block— $27s.$ (a few lots $27s. 3d.$, and one lot $26s. 9d.$), and at the heavy fall of $7s.$ to $8s.$ per cwt. for cube gambier, which brought from $38s.$ for fine free to $33s. 6d.$ to $35s. 6d.$ for blocky. Privately sales have been made at $27s.$ for spot, $25s. 9d.$ for October-November, $25s. 4\frac{1}{2}d.$ January-February, and $25s. 1\frac{1}{2}d.$ March-April.

GINGER.—At the weekly auctions a small supply of Cochín ginger sold quietly without change in price—bold cut at $55s. 6d.$, bright medium washed and small rough at $16s.$ per cwt. Medium washed *Jamaica* sold at $71s. 6d.$ to $74s.$ per cwt.

GLYCERINE.—A better demand is reported, mainly on the strength of a not inconsiderable advance in the price of crude glycerines on the Continent, where Belgium and Holland are said to have bought large quantities, presumably for American account. The prices for double distilled glycerine, s.g. 1.260, however, remain unchanged, though they are firm. Messrs Böhlinger & Sons state that the article has found a

new use in dyeworks. For the solution of the indulines (induline, fast blue, blue for printing, nigrosine soluble in alcohol) for printing purposes one now employs chiefly the so-called acetine, which is prepared by warming for forty-eight hours 1 part of glycerine with 2 parts of glacial acid.

GUM ARABIC.—*Senegal* gum is rather dearer, 90s. being asked for Bas de Fleuve, and 86s. to 87s. for Galam. In other varieties of acacia gum no business is reported here this week; in Liverpool good *Egyptian* sorts have sold at 12l. 7s. 6d., and *Ghezirah* at 115s. per cwt. For *Brazilian* gums the inquiry has also much improved.

INDIGO.—The first parcels of the new crop (native makes) were arriving on the Calcutta market at the middle of last month. The crop is now estimated as follows:—Bengal, 27,000 maunds; Behar, 59,000 maunds; Benares, 13,500 maunds; Doab, 38,500 maunds. Total, 138,000 maunds.

IODINE.—*Crude* remains quoted at the combination price of 9d. per oz., *resublimed* at 13s. 3d., and *iodide of potassium* at 11s. 6d. to 11s. 9d. per lb. The steamer *Araucania* has brought 332 barrels iodine from Valparaiso to Liverpool this week.

IRISH MOSS.—The available stock is again reduced to a very small compass, while inquiry remains good. We hear of sales at the rate of 11l. 7s. 6d. per ton for fair quality.

JABORANDI LEAVES continue to sell at 6d. per lb. in a small way.

JALAP.—A greatly improved demand set in a few days ago, commencing with sales of fair Vera Cruz tubers at 7½d. per lb., and advancing gradually until now 8½d. has been paid, while it is doubtful if holders of the small available stock would go on at that price. There was a good stock in Hamburg when the present demand set in, but much of that has since been disposed of.

LEAD (ACETATE).—The German manufacturers have agreed in future to quote all prices "c.i.f. British ports" instead of "f.o.b. Hamburg." At present the price for white ranges from 23s. to 24s. per cwt.

MAGNESIA SALTS.—*Carbonate* remains quiet at from 25s. up to 45s. per cwt., and *Calcined* at 7d. to 1s. 4d. per lb., according to packing. *Sulphate* firm up to 80s. per ton.

MERCURIALS.—Owing to the advance in the price of quicksilver all mercurials have been raised 1d. per lb., *Calomel* being now quoted at 3s. 7d., *Corrosive sublimate* 2s. 11d., *Mercurial ointment* 2s. 1d., *Red precipitate* 3s. 9d., *White ditto* 3s. 8d., and *Blue pill* 2s. 1d. per lb.

MUSK.—The improvement in the demand continues, and holders have refused to sell fine *Tonquin* pods, first pile, blue skin, &c., under 92s. 6d. per oz.

MUSK (ARTIFICIAL).—Some time ago we referred to the reported discovery in Germany of a synthetic process for manufacturing musk. Messrs. Zimmer & Co., of Frankfort-on-the-Maine, now state that they have had samples of this "musk" submitted to them. The substance appears in the form of yellowish-coloured needle crystals, possessing a pure and strong flavour of musk, but not at all approaching the flavour of good *Tonquin* musk in intensity, which renders it very doubtful whether the artificial compound really represents the odoriferous principle of true musk. For the present, at all events, the artificial product does not seem to offer any advantages for pharmaceutical use.

OIL (CASTOR).—Calcutta seconds have advanced to 4½d. per lb. here, with business at that price, and holders now ask 4¾d. per lb., while for firsts they require 5d. per lb. In Liverpool the market is also very firm, and last month about 2,600 cases Calcutta seconds and 75 tons French changed hands, closing at 4½d. for good Calcutta seconds, 4¾d. for first, and 3¾d. for second pressure French. For forward delivery even higher rates are quoted. We understand that several parcels of castor oil recently received in Liverpool from Calcutta have been found adulterated with cocoa-nut oil, and that similarly sophisticated parcels have reached the London market also. Further particulars may transpire about this matter shortly. The adulteration has never before been known to be practised, and is said to be easily detected by the appearance of the oil. From Calcutta it is reported that before the middle of January, when the new crop is due, still higher prices are expected to rule.

OIL (OLIVE).—The London and Liverpool markets remain very firm at our last quotations. In Northern Italy the market remains exceedingly firm on account of the poor crop prospects.

OILS (ESSENTIAL).—*Star-anise* holders are still exceedingly firm and have had 6s. 2d. per lb. conceded to them. *Essential oil of almonds* is quoted at 28s. per lb., oil of *Cloves* at from 4s. 2d. per lb. for best English drawn, down to lower prices for the foreign. For *Cajuput* more money is required, 4s. per bottle being asked. *Cassia* firm, but not in very active demand, at 3s. 6d. to 3s. 7d. per lb. *Citronella* again quoted somewhat firmer at 13d. per oz. nearest price. *Light Camphor oil* has been raised by the makers to 20s. per cwt., but no delivery can be made until the new year. *Lemongrass* quoted higher, at 1¾d. to 1½d. per oz., though we do not hear of much business. *Peppermint*: American dull, with sellers of HGH at 11s. 3d. per lb.

OILS (VARIOUS).—*Cocconut* oil remains dull of sale at 23s. 6d. for Ceylon in pipes, 26s. 6d. to 27s. for Cochin, and 24s. 6d. for Mauritius in hogsheds. *Cottonseed* firm at 21s. 6d. for new, and 20s. to 20s. 3d. for old oil on the spot; refined, 23s. 9d. to 25s. 6d. *Linseed* oil quiet at 21s. 1½d. to 21s. 4½d. Liverpool export casks, 22s. 6d. to 23s. *Petroleum* steady. American on the spot, 5¼d. to 5½d.; Russian, 5½d. to 5¾d. A good business in *Palm* oil, both on the spot and to arrive, is reported from Liverpool. In London fine *Lagos* is quoted at 26s. 6d. *Rape* oil dearer. Brown on the spot, 31s. 1d.; refined, 32s. 6d. *Turpentine*: American, 35s. 6d. to 35s. 9d. per cwt.

ORRIS ROOT.—In Italy the stock of the best white Florentine root has now been reduced to a very small compass, and is said to be nearly all in the hands of speculators, who require from 55s. to 60s. per cwt. for the best qualities. These excessive pretensions have had the effect of keeping off buyers, who have turned their attention to the inferior Verona root instead, of which considerable sales have been made at 22s. to 29s., according to quality.

PHOSPHORUS firmly held at 1s. 11d. per lb. for sticks, and 3s. for amorphous.

POTASH SALTS.—First Montreal *Potashes* dull, at 20s. 6d. to 21s. 3d.; pearlashes also quiet, at 30s. 6d. on the spot, and less for arrival. *Bichromate* steady, at 4d. per lb., but only a few orders are passing. *Chlorate* is very firm, and for spot stuff 5½d. per lb. is spoken of, but we think that 5d. would still buy without difficulty. For forward delivery 5½d. is named as the price. *Permanganate*.—This article, which has been ruled by a combination of Continental manufacturers, has hitherto ranged at 85s. for small and 95s. for large crystals, but on 'Change this afternoon it was announced that prices had suddenly been reduced by about 20 per cent., to 70s. for small and 75s. for large crystals. The cause of the collapse is not known yet. *Prussiate*: yellow, firmer, at 7¼d. to 7½d., according to brand. Red, 1s. 4d. to 1s. 7d. *Saltpetre*, refined, in kegs, 22s. per cwt. (ground, 24s. 6d.), and in casks or barrels, 21s. per cwt.

QUICKSILVER.—On Friday last the principal importers sold a large quantity at 9l. 5s., and then advanced their quotation to 9l. 10s. per bottle. Second-hand holders followed the movement, and have since crept up gradually to 9l. 9s. To-day the importers again sold freely at 9l. 10s., and the second-hand also cleared a large quantity at 9l. 9s. Very probably there may be another alteration in the price very shortly. The rumours of a projected syndicate in the article are again revived, and we hear it talked of that it is hoped by these means to force up the price to more than double the present quotation.

QUILLAYA BARK.—Business is reported from Liverpool at 15l. to 15l. 10s. per ton.

QUININE.—The week closed with a steady, but quiet, feeling, at 1s. 2½d. to 1s. 2¾d. per oz. for *German* brands on the spot, and 1s. 3d. forward. On Tuesday, and again to-day, after the receipt of the news that the Amsterdam auctions had gone off steadily, a large business was transacted for speculative purposes. The sales since last Friday are said to amount to about 200,000 oz., nearly all in second hands, at 1s. 2¾d., rising to 1s. 3d., for spot stuff; 1s. 3d. for January (late last week); and 1s. 3½d. to 1s. 3¾d. for December-March. The improvement is about ½d. per oz. on the week. Messrs.

Howards & Sons rather surprised the trade early in the week by raising their quotation from 1s. 6d. to 1s. 8d. per oz. for vials; and 1s. 7d. per oz. for bulk. *Pelletier's* remains at 1s. 7d. to 1s. 7½d. per oz.; *Whiffen's* is also unchanged. The Continental makers do not seem at all anxious to sell; they quote: *B & S*, 1s. 4d. spot; 1s. 4½d. spring delivery; *Jobst & Zimmer*, 1s. 5½d.; *Brunswick*, 1s. 4½d.; *Italian*, 1s. 4d. per oz. It is rumoured that a well-known firm of East India merchants is supporting the cinchona syndicate, and has bought a large quantity of quinine this week. The rumour should be taken for what it is worth.

SHELLAC.—Last week closed rather quietly, but fairly steady, with business in *Orange lac*, fine unworked H in diamond, at 107s. 6d. to 110s.; standard second orange, at 74s.; and *AC Garnet*, at 63s. 6d. to 64s. per cwt. *Button* has been in very small demand, its price being generally considered too high in proportion to that of other varieties. A fairly large quantity was brought to public auction this week, consisting of:—

	Cases	Cases
Orange lac	515 of which 127 were sold	
Garnet "	241 " 1 "	
Button "	243 " 125 "	
	999	253

Holders did not show much anxiety to realise, and only a small proportion was therefore disposed of, *Second orange* at about last week's rates, but *Button lac* rather lower. Good bright to red second orange brought 73s. to 75s.; ordinary dull and livery worked, 70s. to 72s.; *Button lac*, good bright first worked, 92s. 6d. to 94s.; seconds, 89s. to 90s.; ordinary dark to fine thirds, 74s. to 87s. per cwt. Privately business was done on Tuesday at 68s. for *OCC Garnet*. After the auctions the market has remained quiet with very little business, and prices remain practically unchanged. At today's call the following prices were made:—

		Nov.	Dec.	Jan.	Feb.	Mar.
TN Orange, sellers .. ..	.. ..	74/	75/6	76/	77/	77/
" buyers .. ..	.. ..	73/6	74/6	75/	74/	74/
AC Garnet, sellers .. ..	.. ..	£4/6	65/6	66/	66/	—
" buyers .. ..	.. ..	63/6	64/	64/6	64/6	—

SODA SALTS.—*Ash* has further advanced since our last report, and now stands at 1½d. landed and 1½d. on the Tyne. *Bicarbonate* remains firm and in good demand at 5l. 10s. ex warehouse on the spot. *Caustic* rather quiet and dull at 7l. 12s. 6d. for 60 per cent. white and 7l. for cream. *Crystals*: There is not so much demand now though the supply still remains small. On the spot 56s. to 57s. 6d. is quoted ex ship, and on the Tyne 46s. 6d. to 47s. 6d. *Nitrate* quiet at 8s. 3d. to 9s., according to quality.

TEA.—The *China* market has again been weakened by heavy sales of Congou, and a further decline must be reported in lower grades, of Moning especially, sound useful teas showing splendid value from 5d. to 6½d. per lb. in Tuesday's and Wednesday's auctions, though prices were somewhat irregular. Kaisows from 5½d. to 8d. were easier, and these teas are all being freely absorbed by retailers, who would be at their wit's end for a 1s. 4d. canister had they to rely on Indian and Ceylon growths. Panyongs from 9½d. to 11d. and Pekoe Congous from 10¾d. to 1s. 0½d. were cheap, and "crack chops" of Soomoo were again disposed of to a not very eager room between 8d. and 9d. Kaisow siftings are well worth attention at the present time, as fine-quality teas can be bought at 3¾d. to 4¼d. per lb., and the leaf is not so ugly and mixed as was the case with the earlier arrivals. Scented Capers and green teas are firm, but Pekoes are weak and very irregular. *Assams* are selling at about last week's prices, with heavy sales, leaf tea under 8d. being a very scarce commodity, and broken tea for price fetching 11¼d. per lb. Better grades are weak, and Pekoes from 1s. upwards to finest are not wanted, and difficult of sale. *Ceylons* are a trifle easier, and small lots of fair tea may be picked up here and there under 1s., but they are few and far between, and while good China tea is being forced off at 6d. per lb. in one sale-room, Ceylons, which are no better tea, are being snapped up from 11d. to 1s. by a score of hungry buyers in a room a few yards off, a state of affairs brought about, of course, by the growing and insatiable demand of the packet trade.

VANILLA.—Our imports have been rather heavy lately, and the market is easier. Mauritius mail news from October 11 states that the crop is very late, and no transactions in the new fruit can be looked for until its arrival, about the end of October. There is no old stock left.

THE AMERICAN MARKETS.

(From our own Correspondent.)

NEW YORK, October 25.

SINCE the last report our drug market has been quite active, with a large business doing in most of the staple articles.

BALSAM COPAIBA.—Early in the week a movement set in, and all the stock in importers' hands was bought by the jobbing houses, as high as 2s. 2d. c.i.f. being paid for *Maranhã*, and 2s. for *Central American* as imported. Arrivals are dwindling down, and reports from the producing countries are not encouraging.

CASCARA SAGRADA.—Sales were made of fine bark at 70s. c.i.f., and there are sellers at the price. Large lots are reported on the way from the Pacific Coast, and as the cost price is low, it is probable that the holders will accept even lower figures, especially as the demand is not very brisk.

OIL OF PEPPERMINT.—There is nothing new going on. The market is dull and quiet. Large orders were received from London for the H.G.H. brand at 11s. London terms, but had to be declined, as the ruling price here is equal to 11s. 9d.

QUININE.—Following the lower prices cabled from London the market is weaker, prime *German* brands in bulk selling at equal to 1s. 3d., 5 per cent. The consumptive demand is still large.

TONQUIN BEANS.—The new crop is arriving rather freely. Ordinary bold *Parás*, mixed with some foxey, sold at 3s. 6d. to 3s. 9d. c.i.f., a high price considering that the new crop *Angostura* can be had in ton lots for 5s. c.i.f.

THE GERMAN MARKETS.

HAMBURG, November 5.

BUSINESS in the drug and chemical markets has been of a very active character since our last report, and there are a good many alterations in the quotations established to-day.

ANTIMONY.—In crude Japanese business has been done at 85m., on the spot; on delivery, October-November shipment, 82½m. is asked.

BALSAMS.—*Copaiba* has been in speculative request at higher rates, fine qualities are very scarce, and for the *Maracaibo* variety 5m. has been paid. Owners are very firm. *Peruvian.*—An actual improvement in price can be reported, the whole stock in first hands (about 160 cases) having been bought up, and prices advanced to 7¼m. to 8m.

BARKS.—*Cascara sagrada.*—The market is unchanged, and the price of genuine bark is held at 140m., although we also hear of slightly lower quotations. *Cinchona.*—A parcel of Bolivian Calisaya, partly good stout and silvery quills, sold well at 1.90m.; twelve packages of the flat yellow Calisaya, slightly damaged, at auction last Tuesday brought 2.60m. to 2.90m. *Porto Cabello* bark is in heavy supply; there are about 500 bales here, but they are firmly held for full rates. *Condurango* rather weaker; 1.80m. to 1.90m. would be accepted.

CAMPHOR.—For refined camphor the market is steadily rising, and 2.95m. is quoted.

GUM ELEMI remains very scarce, and prices are advancing. Prime white sold at 95m.; rather dirty, 80m. to 85m., according to quality. Our stock here is very small.

JALAP has further advanced, and, as the demand for consumption remains good, it is likely that the rise has not yet

reached its limits. The price now ranges from 123m. to 135m., according to quality.

QUININE.—A good demand prevailed for speculative purposes, and to-day second-hand holders ask 42m.

SARSAPARILLA.—*Mexican* is said to have been somewhat more active lately, though prices, especially for ordinary qualities, have not improved; the greater part of the stock in first hands has found buyers at a very low price.

THE AMSTERDAM CINCHONA AUCTIONS.

(Telegram from our Correspondent.)

AMSTERDAM, November 7.

AT the periodical cinchona auctions held here to-day 2,226 packages Java bark were disposed of, with good competition, at prices equalling those paid at Tuesday's London auctions—viz., a unit value of 10 to 10½ cents (= 1½d. per lb.). The following was the range of the sales:—Druggists' barks in quills and chips at 10 to 77 cents (= 2d. to 1s. 2d. per lb.); ditto root, 17 to 22 cents (= 3d. to 4d. per lb.). Manufacturers' barks in quills and chips, 8 to 74 cents (= 1½d. to 1s. 1½d. per lb.); ditto root, 26 to 76 cents (= 4½d. to 1s. 1½d. per lb.). The principal buyers, in order of their purchases, were the Amsterdam quinine factory, the Brunswick works, the Frankfort-on-the-Maine and Stuttgart works, the Auerbach works, and Messrs. C. L. Schepp & Zoon, Rotterdam.

THE FUTURE OF CINCHONA IN CEYLON.

THE *Ceylon Times*, in an article on the above subject, states that, although it is impossible to obtain accurate statistics as to the quantity of bark now on trees growing in Ceylon, the area over which cinchona is growing is so limited that it is becoming every day more easy to estimate the probabilities of the future. If one could only ascertain the exact stock of bark now growing on trees up-country, one could estimate with some certainty the probable output in years to come. A Java planter, who was recently in Ceylon, put down the present stock of bark, from the information given to him, at 10 million to 15 million lbs. at the outside. His opinion was that there were about 2 million lbs. in Badulla, about the same quantity in Madulsima, about 1½ million lbs. in Udapussellawa, and about 1 million in Dimbula. Amongst planters there appears to be an opinion that enormous quantities of bark are to be found in the Uva district; but this idea the *Ceylon Times* believes to be a great mistake. There is no doubt more bark in Uva to-day than in the rest of the island, but the proportion is not so overwhelming as many suppose. An instance is named of a company largely interested in cinchona in Madulsima who, against an export of half a million lbs. last year, will not despatch half that quantity this season, whilst some estates in that district and in others named are more or less cleared out. If all the cinchona trees in Uva were harvested to-morrow, it would be difficult to scrape 9 million lbs. together, and if the rest of the island can make up another 6 million lbs., it will be as much as it can do. This is exclusive of stocks in Colombo, the quantity of which there are means of ascertaining. But these, it is said, do not amount to anything like as much as at the same date last year. It is highly improbable that more than one-third the total available supply of bark will be harvested during this current year, which would give us about 5 million lbs. to export. Allowing, therefore, for a further diminution of Colombo stocks by 1 million lbs., we arrive at 6 million lbs. as the probable output. The effect on prices of such a reduced shipment obviates, it is considered, any further necessity for the formation of a syndicate to hold bark in Colombo. The paper believes that the gentlemen who first interested themselves in getting up a syndicate have now become so thoroughly convinced of the inutility of their efforts, owing to the smallness of the stock of bark now left in the island, that the project has been finally abandoned.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of the principal drugs in the port of London on October 31, 1889, and to the imports and deliveries from January 1 to October 31, as compared with the preceding year:—

Article	Stocks		Imported		Delivered	
	1889	1888	1889	1888	1889	1888
Aloes . . . & pkgs	7,803	6,698	3,549	5,713	2,730	4,737
" gourd	1,351	2,353	378	755	1,076	4,080
Anise, Star . . . chta	71	145	40	100	103	135
Arrowroot . . . cks	13,094	15,198	13,449	13,021	11,221	12,783
" bxs & tins	5,570	8,008	1,729	4,921	4,019	6,859
Balsams . . . cks, &c.	2,392	185	274	154	526	561
Bark (Cinchona),						
S. American cases	430		12		38	
bls. & c.	34,212		11,855		11,916	
E.L., Ceylon, and						
Java cks	538		974		1,032	
bls. & c.	28,355		43,123		33,676	
Borax pkgs	431	1,590	6	717	133	362
Calumba "	1,741	1,854	702	1,118	803	1,916
Camphor "	481	1,321	2,637	6,452	3,193	2,509
Cardamoms . . . chta	1,539	670	3,039	2,306	2,136	6,109
Coccoloba . . . cks	203	359	120	812	261	739
Cream of Tartar cks	10	11	31	20	34	22
Cubebs bgs	348	260	634	525	430	378
Dragon's Blood chta	146	62	193	151	127	168
Galls, China, &c. cs	1,069	2,357	2,532	8,207	3,588	7,660
Turkey, &c. . . . sks	4,781	2,927	8,569	6,414	6,505	6,544
Gums						
Ammoniac pkgs	105	141	6	8	26	97
Animi & Copal						
pkgs	7,874	4,728	9,950	7,367	7,055	7,017
Arabic "	23,705	18,552	27,035	28,669	22,861	21,176
Asafetida . . . "	533	373	926	452	772	529
Benjamin . . . "	2,187	1,862	3,009	2,518	2,709	2,214
Dammar "	4,721	2,905	6,531	4,093	5,321	4,637
Galbanum . . . "	7					
Gamboge "	78	86	273	169	288	189
Guaiacum "		15	115	16	131	70
Kino "	120	97	66	66	33	60
Kowrie tns	1,424	1,500	2,298	2,825	2,262	2,312
Mastic pkgs	41	42	29	60	19	117
Myrrh "	438	416	325	443	432	581
Olibanum "	4,654	3,777	8,156	6,936	6,189	7,135
Sandarac "	332	363	723	1,239	1,118	1,378
Tragacanth . . . "	8,347	4,135	8,585	7,496	5,976	5,264
Ipecac "	371	73	1,092	506	749	555
Jalap bls	71	144	1	182	17	189
Lac Dye chta	5,738	6,040		20	142	451
Nux Vomica pkgs	487	1,526	852	2,211	1,483	1,222
Oils						
Anise cs	63	28	248	128	191	166
Jassia "	35	9	238	129	301	222
Castor cks	339	634	858	345	1,034	602
" cs	2,117	9,254	3,857	11,436	8,748	10,192
Coccoloba tns	2,863	1,772	4,932	4,404	3,487	4,448
Olive cks, &c.	790	543	3,607	1,851	3,166	1,935
Palm tns	20	129	83	189	124	270
Opium chta, &c.		1,607		755		1,253
Rhubarb chta	1,021	969	1,263	1,131	1,265	1,389
Safflower pkgs	478	546	72	520	183	346
Sarsaparilla . . . bls	279	449	1,005	1,220	1,112	1,268
Senna bls, &c.	2,350	1,683	3,293	2,977	2,843	3,620
Shellac, Orange						
chts, &c.	41,280	48,108	16,734	34,420	22,178	27,992
Garnet "	11,889	16,629	6,756	9,726	10,076	8,017
Button "	6,163	9,210	5,417	6,720	7,083	8,685
Total chests	59,332	73,947	28,937	50,856	39,340	44,695
Sticklac chta, &c.	3,234	3,712	1,012	1,013	1,585	1,681
Gambier tns	914	442	7,632	8,083	7,876	9,465
Cutch "	3,198	2,601	3,390	4,816	3,557	3,173
Turmeric "	2,723	3,258	556	1,661	1,056	999
Vermilion, chta, &c.	17	23	119	82	118	122
Wax, bees' . . . bls & cs	633	563	931	364	824	390
" cks & cs	1,073	1,618	2,636	2,282	2,630	2,333
" cakes	9	3	204	24	105	
" Japan pkgs	1,539	1,615	1,166	1,914	1,053	1,217

* The stocks of anise and cassia oils lying at Smith's Wharf and Brewer's Quay are not included in this return.

A GLASS SECTIONAL MORTAR is one of the novelties for shop-windows in the States just now. The mortar is divided into six distinct sections, admitting six different colours of water. The maker claims that "this is the only show-globe ever gotten up that is emblematic of the drug trade." How so, we wonder? Is the American drug trade divided into six sections?



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

Chemists' Assistants' Life in Germany.

SIR,—I observe that your Berlin correspondent has given you occasional glimpses of the position occupied by the *apotheker's* assistant in the happy Fatherland, and has especially informed you in regard to the present agitation for reducing his working hours. Perhaps a rather fuller description of the duties and prospects of a German assistant from one who has had experience of that career, under both British and Teutonic skies, may interest a sufficient proportion of your readers to justify the insertion of this letter.

In the aforesaid happy Fatherland assistants are not appraised according to the height they stand in their stockings, but according to the height they stood on the examination-roll, and provided a man has shown himself clever and hard-working, the employer does not inquire whether his nose be Grecian, Roman, or plain snub. A German assistant would be considerably astonished if he were asked to state his stature or describe his appearance. The English system is much better if it is wished to establish a connection amongst the fair sex, but, on the other hand, the German assistant is hardly likely to waste time by indulging in mild flirtations. As the assistant gets up in the world he generally comes down, for on first going out he is usually located in the attic, much to his disgust, which, however, is unreasonable, as these sky-parlours have several advantages. They are always airy and cool in summer—cooler still in winter—and there is generally a splendid view to be obtained by looking upwards, besides which the air, like the assistant, is fresh, and does not need oxygenating.

Two grades of assistants exist, Major and Minor. The work is about the same for both, and, strange to say, so is the salary. Is it necessary to own that the solicitude and anxiety displayed by the Britisher as pay-day approaches is quite as prevalent amongst his *Deutscher* brethren.

The assistant may either do dispensing work, pure and simple, or may be employed in the laboratory attached to every establishment, which is quite separate from the dispensing part, and is where the so-called "defector" are kept. In businesses employing two or three assistants, the laboratory man only assists in the dispensary when the others are absent on holidays or for some other reason. Although efforts are now being made to increase their spare time, assistants are not so very badly off. They have an afternoon free every week, and one or two evenings after six or seven. Sunday duty is fortnightly; night duty is relatively very severe. The amount of work varies with the time of the year, the district, and especially the nature of the business. In a good number of shops no assistants are kept, the majority keep one, many two, and large establishments three. Places where four and five are employed are only rarely met with. Managing assistants, as such, are not known. The senior Major man, to some extent, supervises the others, but has no real authority, equality and fraternity being the rule. Clerks are unknown in dispensing establishments, and business enterprise is certainly not the strong point of the ordinary German chemist. The assistant mostly lives in the house and eats with the family, but the custom is gradually dying out, especially in large towns, where it is becoming the adopted system for the assistants to live out. An hour is allowed at midday for dinner. Supper, however, has to

be taken into the house and consumed during business hours. Beer plays a prominent part in the evening duties, and no matter how pressing customers may be, the assistant can always find time for an occasional halfpint.

The assistant has to be up betimes, some shops opening at six, others at seven, and none later than 7.30. Breakfast is taken at the establishment, and consists, according to German custom, of coffee with bread and butter only. The toothsome egg or the savoury bacon—or, in fact, any addition to this simple fare—is unknown in the Fatherland. After breakfast the refilling of the shop bottles, pots, &c., begins. Presently customers commence to drop in, but there is no pressure at present, and the intervals are occupied by bottling and finishing off the few specialities every *apotheker* keeps, and such articles as are retailed over the counter, glycerine, Hoffman's drops, &c., and preparing generally for the real business of the day, which consists principally of making up prescriptions; neither tooth extracting nor prescribing is allowed or customary. The pressure, which begins in the forenoon, goes on till five or six in the evening. The regular business hours are till ten o'clock, in some places 10.30, but the establishment is open to callers all night, and this entails much hardship on the unfortunate assistant, who has had quite sufficient fatigue during the day without having his sleep disturbed.

Salaries are not as a rule exorbitant. Those who live in and have full board receive from 50s. to 4*l.* a month, while those in lodgings who dine out, only breakfasting in the house, get from 5*l.* to 7*l.* 10s. a month. Higher salaries are of course to be obtained, but are few and far between.

According to the law of the country a chemist, after going through his apprenticeship and passing the Minor, must act as assistant for not less than three years, which he usually spends in three, four, or five different shops. Only after these three years' practical experience is he allowed to commence his two years' course of study at the university for the Major. On passing this, he has again to play an assistant's part until he can obtain a business for himself, either by purchasing an already established business or by waiting till a licence for a new one is granted to him; the latter an unsatisfactory proceeding, as he may be old and grey before his turn arrives. There are, indeed, many men who remain assistants all their lives.

Yours truly,
ANGLO-TEUTON.

Copies of Prescriptions.

SIR,—My experience is somewhat similar to that of "J. E. K." Some five years ago I gave a copy of a prescription to a customer who was in the habit of getting it dispensed by me for some years previously, and who, I know, required to take the medicine regularly. I have not since dispensed it for him, and I have no doubt he has found his way to the stores. The same individual asked me lately for a copy of another prescription, which I respectfully declined to give, and consequently he has, perhaps reluctantly, to come to me when the preparation is required. In the future I intend to give no copies of prescriptions unless I am thoroughly satisfied that my customer is leaving my locality, in which case I cannot reasonably refuse. In the West-end of the second city of the Empire a certain cutting chemist seems to grant copies freely, as he has special forms for the purpose, with the heading, "Copy of Prescription. For ——" He leads, but I will not follow.

Yours truly,
SELF-PROTECTION. (166/41.)

Fires by Focussing the Sun's Rays.

SIR,—In reading remarks, pages 11–12, October 5, "Fires by Sun's Rays," the fact is recalled to my remembrance that at the drug store in St. John, N.B., where I was employed in my youth, there were o'd-fashioned spherical gallon bottles, one of which, filled with diluted sulphuric acid, placed on a shelf exposed to direct sun's rays, actually ignited a piece of brown paper, which was there by accident. I saw it burst into a blaze. The shelf had several charred depressions in the wood from same cause. I have the pleasure to be one of your earliest subscribers, and remain,

Yours, &c.,
Digby, N.S., October 18. JOHN CHALONER.

Chemists and their Landlords.

167/72. *Civis*, Stourbridge (who writes on both sides of the paper), narrates a difficulty which has occurred to him, and which illustrates the possible dangers to business men from landlord rapacity. The premises he now leases were opened by his predecessor in 1834. The business became a large one, and has still further increased in the hands of "Civis." The present lease is for fourteen years, terminable at seven years by either tenant or landlord. At the expiration of the sixth year, finding the warehousing room inadequate, "Civis" applied to the landlords to give him suitable premises, and thereby (he says) "save me the expense of renting all the available room of my immediate neighbours (tenants of the same landlords), and which premises are in a state of complete wreckage. This they decline to do except on my paying interest for such alteration [This does not seem very unreasonable.—Ed. C. & D.], and intimating that, unless by a certain date I consent to renew the lease on the identical lines of the old one, they will advertise the business over my head. Among other clauses this precious document contains are the following:—The tenant must keep the shop open as a *bona-fide* chemist and druggist until the last moment of his occupancy. He must once in seven years regild, &c., the front of the premises (no light expense), and do every particle of inside and outside repairs." We gather that "Civis" has succeeded in getting more satisfactory premises close by, but that does not affect the moral, which is, that tradesmen-tenants should be very careful to see that the clauses of a lease are such that a landlord, in a moment of capriciousness, spite, or out of a spirit of intimidation, is unable to cut the ground from under one's feet whenever he so chooses.

The Size of the Hay Bacillus.

SIR,—Will you permit me to point out an error in your report of my paper read before the Chemists' Assistants' Association upon "Bacteria"? I refer to the size of the "hay bacillus," which I stated to be about one twenty-thousandth of an inch in diameter, whilst your report states one three-thousandth. I would not have troubled you, but that in treating of such organisms such a discrepancy makes a great difference.

I am, sir, faithfully yours,

86 Newington Causeway, S.E., FREDERICK DAVIS.
November 2.

Dental Anæsthetics.

Attraction (163/39) reports a rather novel accident that occurred to him on Monday, November 4, whilst administering a local anæsthetic, composed of æther, pur. and menthol, &c., to an almost inaccessible broken-down upper molar of a patient. He had directed the patient to keep the head forward, when he coughed, and sent the compound into "Attraction's" right eye, causing intense burning pain, which eventually became very cold at each attempt to open the eye. The pain and delay were the only inconveniences resulting from the accident.

The need of closing one's mouth during operations is acknowledged, but what is one to do with the eyes shut?

Chemists and the Law.

SIR,—Are chemists as a body presumed by the authorities to be cognisant of all alterations in existing laws, and of new laws, which affect them, without having received due notice thereof?

This question occurred to me whilst reading your useful article on "Legislation in 1889," in last Saturday's issue. My first and only intimation of the new section of the Revenue Act, which makes it an offence to sell methylated spirit between 10 P.M. on Saturdays and 8 A.M. on Mondays, came from the pages of your journal. Had it not been for it I should not have known that any such law was in existence, and should have sold the article quite innocently after 10 on Saturday nights. The Act relating to the stamping of weighing instruments, as mentioned in your article, has not, to my knowledge, been made public, though it possibly may be before it comes into force. We are

always grateful for useful information conveyed through the medium of your valuable journal, but surely it ought not to be left to a trade organ to communicate to the trade an addition to an Act of Parliament, the non-observance of which involves such a heavy penalty as in the case of this new addition to the Revenue Act.

Yours faithfully,

YORKSHIRE. (169/6.)

[It is a well-known maxim that "ignorance of the fact excuses; ignorance of the law does not excuse." The Acts referred to have been several times alluded to in this journal. The moral is obvious: Never miss reading THE CHEMIST AND DRUGGIST.]

Returning Empties.

SIR,—Your reply to "Verax" (161/43) reminds me of a similar incident which occurred to me when I purchased my business. I returned some empties which I had bought with the stock to the firm from which they came, but received no credit-note, and their traveller on his next journey declined to allow me for them, stating that they had been allowed for to my predecessor. After a little useless argument I let the matter drop, feeling rather aggrieved, but the amount was so trifling as not to be worth troubling further about. I have since learned, from doing business with the firm, that they always charge their packages when sent out, but deduct their value in full at settlement, whether they have actually been returned or not, it being understood that they are to be returned. I presume I could have claimed the amount from the trustees of whom I bought the business, though they were, doubtless, innocent of any intentional misrepresentation. I may add, for "Verax's" information, that I was allowed for empties by several firms to whom my predecessor was indebted at the time, without any demur.

Yours truly,

YORKSHIRE. (169/6.)

LEGAL QUERIES.

165/21. *S. D.*—Much obliged for information, but the error was corrected last week.

164/49. *Q. R. S.*—Unregistered persons may sell zinc ointment.

164/53. *Enquirer.*—Unregistered persons may sell blue vitriol.

166/5. *A. D.*—The Minor certificate of Great Britain is all that you require legally to ensure registration in any of the Australasian colonies or in South Africa. But the extra knowledge you will acquire in preparing for the Major examination, and the higher position it must give you, ought to be good enough to induce you to spend the time and money necessary for it while you have the opportunity.

168/2. *Indian.*—It is not illegal for an unqualified person to carry on a business under the style of "Blank's Drug Stores," but he must not keep open shop for selling, nor sell, any of the scheduled poisons. A limited company, however, may sell poisons as well; but in their business, as in any other, the person who actually sells the poison is liable to a penalty if not qualified.

168/3. *Attraction.*—The agent who first introduces the business to the client or the client to the business is the one who is entitled to the commission. But if you put it in the hands of several agents you should have a clear understanding with all of them, letting each know that you have instructed others, and defining the circumstances under which commission will be paid.

161/43. *Verax.*—The question raised is a local one, on which we cannot usefully advise you.

167/61. *Alpha*.—The sale of "Paregoric Substitute, containing no Opium," will be quite legal, if it is made clear to the purchaser that the article supplied is a substitute, and is not paregoric.

142/34. *Chips*.—None of the Australasian Pharmacy Acts give power for the registration there of persons who are registered in Great Britain as having been in business before the passing of the Act. They only recognise persons holding certificates or diplomas of competency.

142/34. *Chips*.—Persons on the Dentists' Register can call themselves dentists, dental surgeons, dental practitioners, &c. These titles are prohibited to persons not on the Register. Persons on the Register may only call themselves licentiates of this or that college if they are actually such.

151/54. *W. B. B.*—All pills supplied for passenger-ships are required by the Board of Trade Regulations to be gelatine-coated; those for merchant-ships are not required to be so coated. (See this journal, February 2, 1889, and March 9, 1889.)

165/12. *Scotus*.—You may not use the Royal Arms in connection with your business in such a manner as to be calculated to lead persons to believe that you are carrying on your business under royal authority, unless you expressly get that authority. This applies, we believe, even though you have occasionally dispensed for royalty. Warrants of appointment are only granted to tradesmen who serve regularly in one or other of the household departments. If you think you are entitled to it apply to the Board of Green Cloth, Buckingham Palace, or, perhaps, to an equivalent authority in Scotland.

139/61. *Help*.—No permission is required for the use of methylated finish.

154/18. *Gundulph*.—The terms of the veterinary surgeons are very comprehensive. An unregistered person may not use any name, title, addition, or description which implies that he is a veterinary surgeon or a practitioner of veterinary surgery, or any branch thereof, or specially qualified to practise the same. But we do not think the description "veterinary chemist" could be brought within the prohibited degrees.

169/50. *Minor*.—An unregistered person cannot legally carry on the business of a chemist and druggist, never mind whether he employs a qualified assistant or not. If he carry it on under the name of his assistant he is still liable, and may be fined if his ownership can be proved.

168/46. *Erica*.—The provision that methylated spirit may not be sold between 10 P.M. on Saturdays and 8 A.M. on Mondays is made by an Act of Parliament, and not by a mere order of the Board of Inland Revenue. It has been mentioned several times in this journal. We cannot think it furnishes a grievance of a very serious nature.

169/7. *Lex* bought a business, paying for goodwill. His predecessor made a preparation, which may be called "Lex's Specific." "Lex" has continued to make this, but now a brother of the late proprietor, who was for a time a partner with his brother in another business, is making and selling a similar preparation as "S. Low's Specific." Can he be restrained? The title is not registered as a trade-mark. It is not quite clear from this that "Lex" really bought the right of this preparation. If, however, there is no doubt about his ownership the question would be whether the rival preparation is calculated to deceive, so that an unwary purchaser might accept one preparation when he thought he was buying the other. The registration of the title as a trade-mark is immaterial so far as this part of the case is con-

cerned, and the addition of a letter in front of the name would make no difference at all. The court would look very suspiciously at the rival preparation, both as to the label, circulars, wrapper, and general appearance, to see if it was an imitation of the older preparation, and if this was so would no doubt grant an injunction.

152/25. *Pot. Chlor.* wants to know whether it is legal for him to stamp the street flags with an advertisement of his cough balsam, and, if not, what could the corporation do to him? The property in the pavement of the streets is undoubtedly vested in the local authority, as representing the public, and they have a right to restrain the improper user of same. To stencil the flags is just as much a trespass as to appropriate a portion of the street for building purposes, and the corporation would no doubt be entitled to an injunction to restrain our correspondent from doing as he suggests, and for damages.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Mr. J. M. Norris, 168 Piccadilly, says "An Invalid Subscriber" should send to Mr. Maskelyne, Egyptian Hall, W., for particulars of his mechanical cashier and book-keeper.

Mr. James Platt, the author of "Men and Women," objects to the insinuation which he thinks is conveyed in our notice of the above book, that he has been unfair to the *Daily Telegraph*. He thinks we ought either to withdraw that "unjustifiable and uncalled for insinuation" or publish the letter which he sends us. We withdraw.

One Who Wants to Know.—We cannot undertake the analyses you ask for.

Manxman (157/60), *Embrocation* (160/44), *Canis* (164/26), and *C. J. Tayler*.—These are applications for proprietary formulæ, which we are unable to satisfy.

160/65. *Smoke*.—**Herbal Smoking Mixture**.—Stramonium, yarrow leaves, coltsfoot leaves, and rose petals. Cut fine. Equal parts. Scent with musk or sandal-wood oil, and mix.

165/4. *Dalken*. **Corks are Bleached** by washing them and exposing while still wet to the vapour of burning sulphur. Afterwards wash thoroughly with water.

164/60. *Exeter*.—Your questions 1 and 4 were replied to on October 26. For a reply to the second write to the hospitals. The book costs about 3s. or 4s., we believe.

164/74. *J. S.*, and 164/48, *Cricket Ball*.—You will find particulars regarding the **Perfuming of Theatres** in our issue of May 18, page 711. In the subsequent issue Mr. Williams, 99 Falkner Street, Liverpool, offered to tell any chemist how it is done. You might write to him.

164/32. *Tartar Emetic*.—If an editor is not to exercise his judgment as to what is inserted in the paper he conducts we fail to see what useful purpose he serves. Nor do we understand your object in sending us communications, and ensuring their rejection by insulting insinuations.

168/8. *Attraction*.—We have published a number of recipes for lavender-water during the past three months.

150/52. *J. R.*—Let us have the formula which you are dissatisfied with.

164/7. *J. M.*—We are sorry that the book referred to has been delayed. We do not know any other of the same character.

130/21. *P. C.*—We have the matter under consideration. Meanwhile, we have no doubt that the 1890 DIARY will satisfy many of your requirements.

126/11. *Anxious*.—(1) There are so many things sold as "mineral oil" that we should like to know better what you mean before we attempt to reply to your query. (2) "White oils" is the thing you want. We give a formula for it in the DIARY. See also our issue for February 9, page 215.

125/7. *W. T. Olive*.—Tincture of iodine is used for imparting a brown colour to the skin. It is, of course, evanescent.

125/3. *J. Hickling*.—Watts's "Chemistry," as edited by Professor Tilden, is as good a work as you can have. It is published in two volumes, inorganic and organic, which are kept well up to date, and cost 9s. each.

156/35. *Economicus*.—A correspondent, who adopted the same *nom de plume* as yourself, a year ago recommended the very same process for **Cleaning Corks** as you have not found satisfactory. What *can* we say? Corks can be got at 6d. a gross nowadays. Would it not be better, perhaps cheaper, to buy new ones, and use what are dirty to make a fire?

122/41. *J. S.*—One of the nicest **Glycerine Creams** is prepared in the following manner:—

	Oz.
Solution of cocoa-nut oil soap (1 in 8) ..	1
Lanoline	1
Glycerine	1

Melt the lanoline along with the solution of soap on a water-bath, then add the glycerine, and mix well. Perfume with rose or neroli. Dilute, if necessary, with equal parts of the soap solution and water.

159/62. *W. F. G.*—You may get the information you require regarding nitrous-oxide gas in Dr. D. W. Buxton's "Anæsthetics: their Uses and Administration" (Lewis, 4s.).

159/43. *F. I. K.*—For an **Ink** to mark blankets you might use a solution of black-wool dye in dilute acetic acid. Thicken with treacle, and use with a stamp. To have the same success as calico-printers you must do as the calico-printers do—that is, use mordants and every precaution which will assist in fastening the colour.

161/54. *Item*.—For glycerine pastilles see "The Art of Dispensing." We do not have working formulæ for voice-jujubes and the like. It is quite impossible for chemists to make these, as it takes about three months to dry them in a specially-constructed room.

163/63. *Inquirer*.—To **Blacken a Billiard-ball**, immerse in tinct. ferri perchlor. for six hours, then in a solution of a 1d. packet of Crawshaw's black dye for the same time. Dry and polish with olive oil.

164/8. *John*.—**Ammoniophone Solution** is, according to the patent, a mixture of ammonia and peroxide of hydrogen solutions flavoured with peppermint.

164/14. *Clicker*.—Shoemakers make waterproof soles to boots in various ways, the simplest being to paint a solution of guttapercha in bisulphide of carbon over the in-sole after it is packed, and before the sole proper is sewed on. Outside applications are ineffectual unless repeated often. A mixture of cod oil, hard paraffin, and resin, of buttery consistence, would do as well as anything else for this purpose.

164/65. *Vinegar*.—There is neither book nor process for it that we know of.

164/49. *Q. R. S.*—Hard blue ointment may be softened by heating carefully and adding a sufficiency of olive oil.

165/17. *Sussex*.—Try the following plan for **Glycerol Podophyllini** (gr. $\frac{1}{4}$ to $\frac{3}{4}$):—

Podophyllin	16 grains
Carbonate of potash	4 "
Rectified spirit	1 oz.
Water	$\frac{1}{2}$ "
Tincture of ginger	$\frac{1}{2}$ "
Glycerine	6 $\frac{1}{2}$ "

Mix the water and spirit, and add the podophyllin and potash to it. Shake well, and add the glycerine. Heat carefully until the mixture measures $7\frac{1}{2}$ oz, then add to it the tincture of ginger, and set aside until clear.

169/6. *Yorkshire*.—We do not know where to find the statistics you ask for.

John Thompson (Londonderry).—Cobweb pills are not new. See this journal, July 16, 1887, and previous numbers there referred to.

139/61. *Help*.—We do not recollect the correspondence you refer to. Frost has been advertised in this journal by Messrs. Cubley & Preston, Sheffield.

168/60. *Nemo*.—You will find most of the information you want about tobacco in an article in THE CHEMIST AND DRUGGIST for July 14, 1883. The manufacture of tobacco is fully described in Spon's Encyclopædia, and we believe you can get the part containing that article from the publishers, 46 Charing Cross, at 2s. Hydronaphthol is a speciality of Messrs. Seabury & Johnson's.

165/11. *Dai*.—To **Waterproof Cloth**, first prepare stearate of alumina by adding to a hot solution of tallow soap a strong solution of alum. Stearate of alumina is precipitated; collect this, wash, dry, and heat on a water-bath until transparent. Finally make it into a paint with turpentine, heating the mixture to make it uniform. This is to be used for brushing on the cloth.

165/3. *Manxman*.—Dr. J. Ashburton Thomson's book, "Free Phosphorus in Medicine" (Lewis, 7s. 6d.), is the best treatise you can get on the subject.

165/46. *Nitram*.—(1) We have never had any difficulty in dissolving the whole of the resin in the fats in making resinous ointment. (2) **Tinctura Chloroformi et Morphine**.—The reprints of the Pharmacopœia direct the hydrochlorate of morphine and oil of peppermint to be *diffused* (not *dissolved*) in the spirit. This is the result of criticism four years ago.

165/45. *J. R. W.*—**Experimental Chemistry for Lecturers**.—You do not mention the kind of lectures you wish to give. Perhaps you will find Castell-Evans's "New Course of Experimental Chemistry" (Murby, 2s. 6d.) the most suitable and the cheapest book.



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WITH VITRIFIED (burnt in) LABELS

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Labels indestructible and of elegant appearance, forming an even surface with the glass or porcelain. The Jars of best porcelain, thoroughly greaseproof. The Bottles hand-made and of superior quality. Both are unsurpassed by anything in the market in every respect. Also a CHEAPER sort of Bottles and Jars, with labels equally indestructible, but very plain, especially suitable for Dispensaries, &c. Intending Buyers are requested to inspect Samples at:

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POISON BOTTLES of Ribbed Blue Glass, with RAISED White Vitrified Letters, and the Word "POISON" in Red at foot. **DRAWER LABELS** of Crystal Glass, with Bevelled edges and Vitrified Labels to match the above Bottles and Jars. **A STANDARD LIST OF LABELS** for Chemists' Shop Bottles, Jars, and Drawers will be sent free on application.

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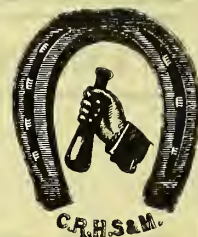
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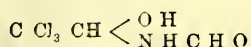
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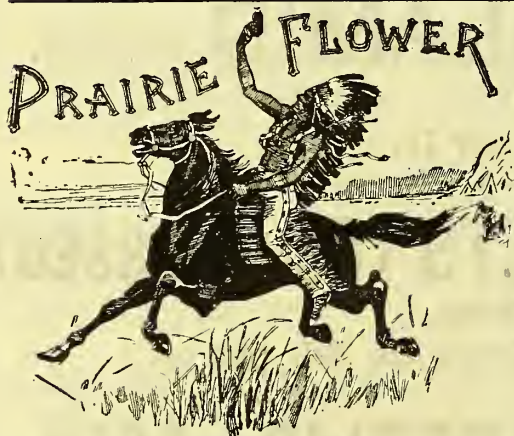
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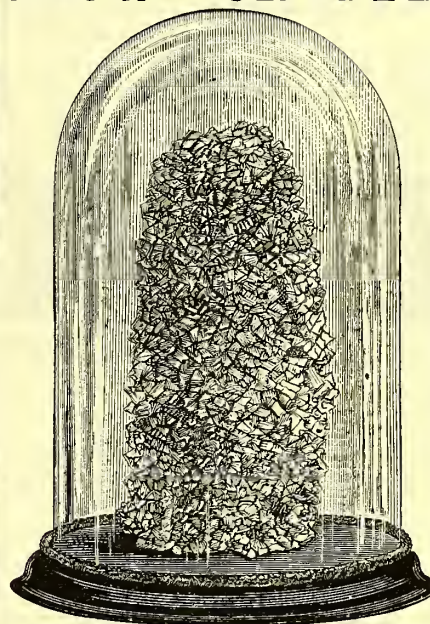
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Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

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Can be obtained from all Wholesale Houses, or direct from the Sole Manufacturers,

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1 & 3 SUN STREET, FINSBURY SQUARE, LONDON, E.C.

LOFTHOUSE & SALTMER, MANUFACTURING CHEMISTS, WHOLESALE & EXPORT DRUG MERCHANTS, HULL,

Manufacturers of all Pharmaceutical Preparations on the best and most improved principles.
QUOTATIONS ON APPLICATION.

SOLUT. ÆTHERIS NITROSI (Æther. Hyponit.)

1 part to 5 Sp. Vial Rect. 56 o.p. makes Sp. Æth. Nit. 850.

This concentrated preparation, carefully drawn in our own laboratory, is highly recommended, and daily finding increased favour with the trade for making Sp. Nitre, as required for use, thus avoiding the risk of loss of Nitrous Æther, and the development of free acid, both of which are almost certain to occur in Sp. Nitre which has been some time drawn.

Price in 1lb. Bottles, 3s. per lb.; in Winchester Quarts, 2s. 10d. per lb., net.

Importers of Cod Liver, Castor, and Olive Oils; Otto de Rose, and all Essential Oils; Valentia Saffron; Vanillas; Fruit Essences; Carmine; Aniline Dyes; Bees Wax, &c., &c. Applications for Special Quotations invited.

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Telegrams—"Fuerst London."

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"Second to none." All buyers desiring absolute purity and guaranteed excellence should write for Samples and Prices.

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GRAN. EFFER. CITRATE OF CAFFEINE.

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AND ALL OTHER GRANULAR PREPARATIONS.

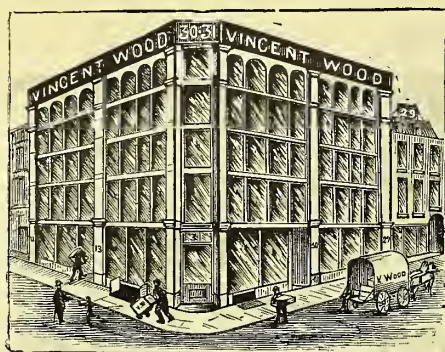
Now prepared only by CURTIS & COMPANY, 48 Baker Street, Portman Square, LONDON, W.

GRANULAR EFFERVESCENT ANTIPYRIN.

(Each Teaspoonful contains 8 grains.)

Introduced by Curtis & Co.

See that these preparations bear our name.



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FAIR PLAY A JEWEL.

As we live in the days of copyism, and unscrupulous traders of no originality rob us of our inventions, I would claim protection for my invention, viz.: "The EUREKA" Medicated Pine Wool Felt Appliances, for the following reasons:—

For three years I was studying the manufacture of this Felt and the manipulating of the Drugs embodied therein, having for my guidance a qualified expert.

I challenge anyone to prove their placing upon the market a medicated Felt previous to October 1, 1887, the date of my first introducing my Pine Felt.



I can affirm that some of the imitations do not contain the slightest virtue as regards medicaments other than a sprinkling of an essential oil.

They say imitation is the sincerest flattery, and as there are now a great many I simply bow to the (not required) honour.

To those who require the original articles, insist upon examining the goods which have the trade mark "EUREKA" upon the Felt, and the label attached bears the name of E. J. G. Berkley, L.R.C.P., Ldn., M.R.O.S., &c.

These goods are stocked by the Principal Wholesale Houses, or, if difficulty be experienced in procuring, direct from the Inventor (Wholesale only.)

VINCENT WOOD,

MANUFACTURER OF SURGICAL APPLIANCES. [Established 50 Years.]

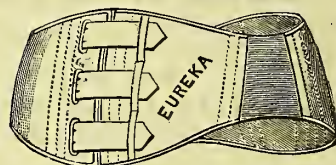
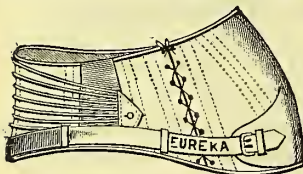
29, 30, 31 Paternoster Square, and 11, 12, and 13 Rose Street, Newgate Street, LONDON, E.C.

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Terra-Cotta Models under Glass Show Cases, Circulars, Show Cards, &c., supplied free of charge to those stocking my goods.



DINNEFORD'S FLUID MAGNESIA



PERFECT IN PURITY AND UNIFORM IN STRENGTH.

The most efficacious antacid and mild aperient for Delicate Constitutions, Ladies, Children, and Infants.

OF ALL WHOLESALE DRUGGISTS.

SEABURY'S MUSTARD PLASTERS

ARE THE BEST.

On cloth	100	10	6	3 leaves;	1	5-yard rolls
	84/	10/	6/	3/	7/	10/ 84/ per doz.
On paper	100	50	10 leaves;	1 yard	5-yard rolls	
	60/	30/	7/	7/	60/ per doz.	
				6 in.	12 in. wide	

Seabury's Half-strength Mustard Plasters on Paper, 10 leaves in box, 7/ per dozen boxes.

These Plasters are intended to meet the wants of persons of specially sensitive skins, who cannot endure the activity of full strength.

SUBJECT TO DISCOUNT.

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MONTREAL.

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42

GOOD BUSINESS!!

BE READY AND BE WISE.

READY in being prepared with Remedies to battle Winter Ailments, and WISE in purchasing

BROOKS'S RELIABLE FORMULÆ.

Preparations of which (as sample) may be had post free 4d. each—to prove they are as advertised.

GOOD BUSINESS may be done with the following, as all are excellent and in full sale at Hornsey:—

"BALM OF GLYCERINE AND LICORICE"—certain cure for Coughs, Colds, Hoarseness, Whooping Cough, and Lung Affections; most soothing to the chest, nice taste, rapidly efficacious, a good all-round Cough Mixture. Costs 10d. per lb.

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"GLYCERINE CREAM"—Perfection of Toilet Requisites. quickly cures Chapped Hands, Frost Bites, Roughness, Cracks, Tender Feet, and prevents Chilblains; most elegant, not sticky, deliciously perfumed.

"CORN CURE"—Salicylic and Iodine, does not readily dry up; this will answer when all other so-called cures fail; test, send for sample.

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"RED ROSE LOTION" (from recipe of Erasmus Wil-on), most excellent Skin Depurative, removes Spots, Pimples, Blackheads, &c.; Stops Irritation, is cooling and sweetly perfumed.

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Recipes, 7d. each; Six for 2s. 8d., with full instructions for making, use, dose, &c., post free.

Send for particulars of SPECIALS, stepping stones to a fortune; also "Lovely Little Landscapes," India Rubber Goods, splendid little Turkey Cups, 1s. doz. free, and other sponges.

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Chloral, Terpene, Osmic Acid, Tannin, Tartar Emetic.
LIQUID CHLORIDE OF METHYL, for the treatment
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N.B.—Stock of the above kept in London.

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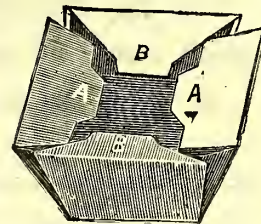
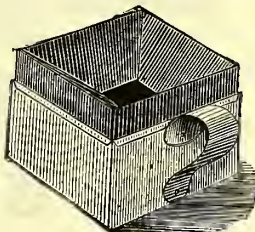
METHYLENE,
Obtained by the action of Metallic Zinc on
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Discovered to be a general Anæsthetic by Dr.
RICHARDSON in 1867.
Bottles, 1½s.; 5-oz., 3s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.
COMPOUND ANÆSTHETIC ETHER,
For producing Local Anæsthesia.
In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.
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In 2 oz., 4-oz., 8-oz., and 16-oz. Stopped Bottles, 2s., 3s. 6d., 7s., and
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For promoting the Healing of Wounds by the first intent
In 2-oz. and 4-oz. Bottles, with Brush, 2s. 6d.
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CHARCOAL CAPSULES
Containing Pure Vegetable Ivory
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In Boxes, 2s. 6d. each.

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SANITARY CUSPIDORES,

OR

SPITTING CUPS FOR INVALIDS.



(PATENTED—No. 5673.)

Consisting of a Metal Frame, into which a
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The receptacle can be removed and destroyed after
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In Cartoons containing 5, with metal frame, at 7s. per doz.
Cartoons, or loose, 40s. per 1,000; frames, 20s. per 100.

SUBJECT TO DISCOUNT IN QUANTITY.

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May be obtained through any of the Wholesale Houses.

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RED AND WHITE ROSES, The most popular Size and Shape Cachou in the Trade. FRAGRANT "BOUQUET" CACHOUS

HELIOTROPE VIOLET ORANGE BLOSSOM PRIMROSE

The excellence of the perfume and the superior make of these Cachous create a great demand wherever they are introduced.
Price 2s. 6d. per lb., 5 per cent. discount. Samples on application.
Parcels of 14 lbs. forwarded carriage paid, with a handsome Glass Show Jar gratis (fig. A, No. 5, Maw's list), on receipt of P.O.O. for 33s.

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Beg to inform their friends and the Trade generally that, having
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BARRON, SQUIRE & CO., BUSH LANE,

and also the various Formulæ of the Special Preparations of

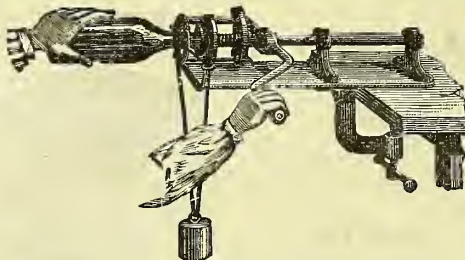
JAMES BASS & SONS, HATTON GARDEN,

they are prepared to execute orders for the same, and pledge them-
selves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

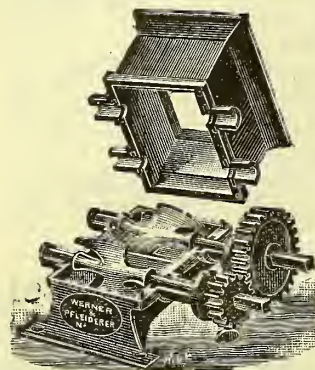
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The only Machine
which leaves no crease
or pleat on the
Capsule.



Can be fixed to any
Counter.
A single pull of the lever
is sufficient
to fix the Capsule.

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Size 3, Type I, for 1-lb. Mass.

THE "UNIVERSAL" KNEADING AND MIXING MACHINE FOR PILL MASS MAKING,

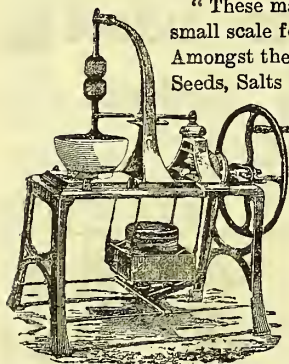
ALSO FOR
Horse Balls, Tooth Pastes, Ointments, Soaps, Powders, and for
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REPLACES WITH ADVANTAGE ALL OTHER APPLIANCES FOR THESE PURPOSES.

Made in various sizes, to do from $\frac{1}{2}$ lb. up to 1 ton at a time.

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GOODALL'S PATENT GRINDING & LEVIGATING MACHINES.



"These machines have for many years proved most serviceable on a large and small scale for Grinding, Levigating, and Mixing Powders, Pill Masses, Paints, &c." Amongst the articles which are readily ground by it may be mentioned Ginger, Seeds, Salts of all kinds, Cream of Tartar, Sugar, Cocoa, Pepper, Spice, Jalap, Rhubarb, Gums, Aloes, Barks, &c.; and for mixing or kneading Lozenges, Pill Masses, Glaziers' Putty, Bread, Biscuits, &c.

ILLUSTRATED PRICE LIST, with full particulars, sent free.

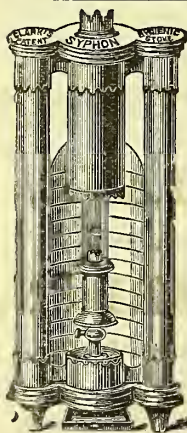
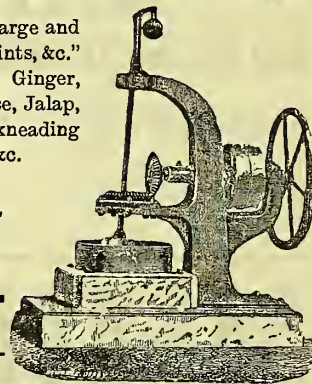
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Agent—Z. CARTWRIGHT.



TO CHEMISTS AND DRUGGISTS.

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"SYPHON"

(REGISTERED TITLE)

HYGIENIC CONDENSING GAS HEATING STOVES.

NO FLUE REQUIRED. ARE FREE FROM SMELL OR SMOKE.

All injurious vapours are reduced to harmless liquid inside the Stove, and passed out at foot into a tray provided for that purpose.

FOR USE IN HOSPITALS, SICK CHAMBERS, BEDROOMS, HALLS, CONSERVATORIES, CHURCHES, SCHOOLS, ETC.

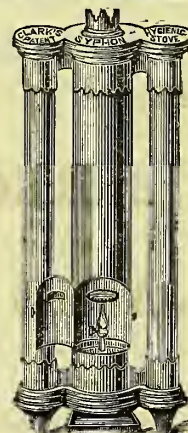
Specially suitable for patients suffering from Bronchial affections, as a moist atmosphere is obtainable when required.

FOR TERMS, PARTICULARS, AND PRICES, APPLY TO

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PERFUMERY FACTORS. AERATED WATER MAKERS.

SYRUP, CORDIAL, AND LIQUEUR BOTTLERS.

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THE "INTERNATIONAL" FEEDING BOTTLES

Constantly Increasing Sales. Cheapest and Best Series to Adopt.

SEND FOR SPECIAL TRADE LIST.

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WITH OR WITHOUT LETTERING, LABELS, ETC.

SHOW CARBOYS, JARS AND POTS.

GROUND-GLASS STOPPERED BOTTLES.

EVERY CLASS AND DESCRIPTION.

OPAL POTS, JARS, AND BOTTLES.

GREAT VARIETY. NEW PATTERNS.

PRICE LISTS UPON APPLICATION.

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(LIMITED)

AIRE AND CALDER BOTTLE CO.

83 UPPER THAMES ST., LONDON.

TRADE PRICES.

SEND FOR OUR LISTS.

PRICE LISTS UPON APPLICATION.

FACTS SPEAK FOR THEMSELVES!

Results of a voting recently held in the pages of the *British and Colonial Druggist*, as to the most popular makers of the various articles sold by Chemists, reveal the following indisputable facts under the heading of **Menthol Cones**:—

Votes for—

Hockin, Wilson & Co. 65
Christy & Co. 63
Maw 28
Castle Brand 5

161

Votes for—

Shirley's

A1 Brand 644

So that out of 805 votes, **SHIRLEY'S BRAND** obtained 80 per cent., whereas all other brands *put together* obtained but 20 per cent., or comparing each brand separately, **SHIRLEY'S** obtained—

Nearly 10 times as many votes as	Hockin, Wilson & Co's.
Over 10	Christy & Co's.
" 23	Maw's.
" 128	Castle Brand.

THE REASON IS SIMPLE.

Every endeavour has always been made to assist the retailer in selling

SHIRLEY'S A1 BRAND MENTHOL CONES,

By giving away Show Cases, Dummy Cones, Handbills, &c., the latest in this way being "**THE LITTLE CRIER.**"



This Elegant Bisquit-China Figure, an Ornament to any Shop,

GIVEN AWAY

To Purchasers of 25/- worth of

SHIRLEY'S A1 BRAND MENTHOL,

Or two if 40/- Order is Placed.

The following special parcels have been arranged to suit all classes of trade:—

Parcel 1, 35/-. 4 doz. 2d., 1 doz. 3d., 2 doz. 3½d., 3 doz. 4d., 2 doz. 6d.

Parcel 2, 25/-. 4 doz. 6d., 2 doz. 4d., 1 doz. 1s.

Parcel 3, 25/-. 3 doz. 3d., 2 doz. 1s., 1 doz. 4d.

Parcel 4, 25/-. 1 doz. 9d., 2½ doz. 1s., 3 doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield an average profit of 80 per cent. to the retailer on his outlay.

Parcel 5, 40/-. 4 doz. 2d., 2 doz. 3d., 3 doz. 3½d., 5 doz. 4d., 4 doz. 6d.

Parcel 6, 40/-. 5 doz. 6d., 3 doz. 4d., 2½ doz. 1s.

Parcel 7, 40/-. 4 doz. 6d., 4 doz. 4d., 1 doz. 9d., 2 doz. 1s.

Parcel 8, 40/-. 4 doz. 1s., 2 doz. 9d., 3 doz. 1s. 6d.

1d., 2d. and 3d. MENTHOL CONES for those who are obliged to sell cheap shapes.

No. 110v. 1d. Vase shape, 3 doz. on a card. 7/6 gross.

No. 114. 2d. Varnished Pedestal shape, 3 doz. on card. 16/ gross.

No. 115. 3d. Varnished Draughtsman, 2 doz. on card. 20/ gross.

A1 COCAINE MENTHOL TOOTHACHE TUBE.

Sells splendidly; 12 on a card, 3/6 dozen.

**SHIRLEY'S****20/ CASE OF SMELLING BOTTLES.**

Order one of these cases and you will not regret it. The case is lined with maroon velvet, and has a mirror back. The goods can be got at from the counter, as the case opens from the back. You can rely on a good assortment of bottles being sent you.

ARTHUR W. SHIRLEY, 30 PATERNOSTER SQ., LONDON, E.C.,
And 11, 12, and 13 ROSE STREET, NEWGATE STREET.

PATRONISED BY HER MAJESTY.

BARBER'S ORIGINAL CRIMSON MARKING INK,

WHICH IS CHANGED BY HEAT TO A JET BLACK.

Put up for Retail Sale in 6d., 1s., 2s., 2s. 6d., and 5s. Bottles.

Also Barber's Concentrated Liquid COCHINEAL, for Colouring Jellies, Custards, &c.

Put up in 6d. and 1s. Bottles.

Also Barber's Artificial Ivory for Filling Decayed Teeth, 1/- per packet.

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Can be obtained through any of the Wholesale Firms in Great Britain, or from FELTON, GRIMWADE & CO. Melbourne; ELLIOT BROS., Sydney and Brisbane; KEMPTHORNE, PROSSER & CO., Dunedin and Auckland; FELTON, GRIMWADE & CO., Wellington; or direct from the Manufacturers—G. BARBER & CO., Club Moor, Liverpool, England.

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ESTABLISHED OVER 100 YEARS.

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WHITE ROSE TOOTH PASTE.

WARRANTED TO KEEP IN ANY CLIMATE.

In Square Earthenware Boxes, Gilt Burnt-in Labels, 12s. per dozen.

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S.V.R.**PURE GRAIN SPIRIT 56 O.P., B.P., 18/5**, used by the principal Wholesale Druggists

Do.

Do. **DOUBLE DISTILLED 18/9**

Cash with Order.

Reductions for Quantities.

SAMPLES FREE.**STEPHEN SMITH & CO., BOW, LONDON, E.****S.V.R.****SPECIALITY FOR PERFUMERY.**

This pure grain spirit, which has been thrice rectified and filtered through charcoal, is being largely used in making high-class Perfumes.

Price, **19/-**, 56 o.p.; **19/6**, 60 o.p. Cash with order.

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IN ALL THE ART SHADES.

For all kinds of decoration on Wood or Iron. Dry with a surface like Porcelain. Sold in small or large Tins, or in bulk. Prices and shades on application.

WHITE LEAD, ZINC WHITE,
PAINTS & COLOURS OF ALL KINDS.**MIXED PAINTS READY FOR USE,**
In Tins, 1, 2, 4, 7, and 14 lbs. each.**HIGH-CLASS VARNISHES**Of all kinds, for Coachbuilders, Decorators, &c.
OIL BOILERS, REFINERS, & MERCHANTS**BALL DENOTES**
COLOUR OF PAINT. Export Orders receive special and prompt attention.**DISPENSING BOTTLES & PHIALS**

WE NOW SUPPLY OUR CELEBRATED

6 and 8 oz. Bottles at 7/6 per gross.**3 ,, 4 oz. ditto 6/6 ,,**

All other Sizes and Kinds equally low.

I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS,

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Established upwards of 50 years. Bankers: London and Westminster Bank.

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.**JOHN OAKLEY & SONS,**

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For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.**OAKLEY'S "POLYBRILLIANT" (Registered).**

A Magic Pomade for Cleaning Brass, Copper, Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Pastes. Tins 1d., 2d., 3d., and 6d. each.

WELLINGTON BLOCK BLACK LEAD,
In 1d., 2d., and 4d. Blocks, and 1s. Boxes.**WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.**

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SPECIALITY**CHLORIDE OF LIME!**
IN AIRTIGHT WATERPROOF
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	"	8/	---	"	2/
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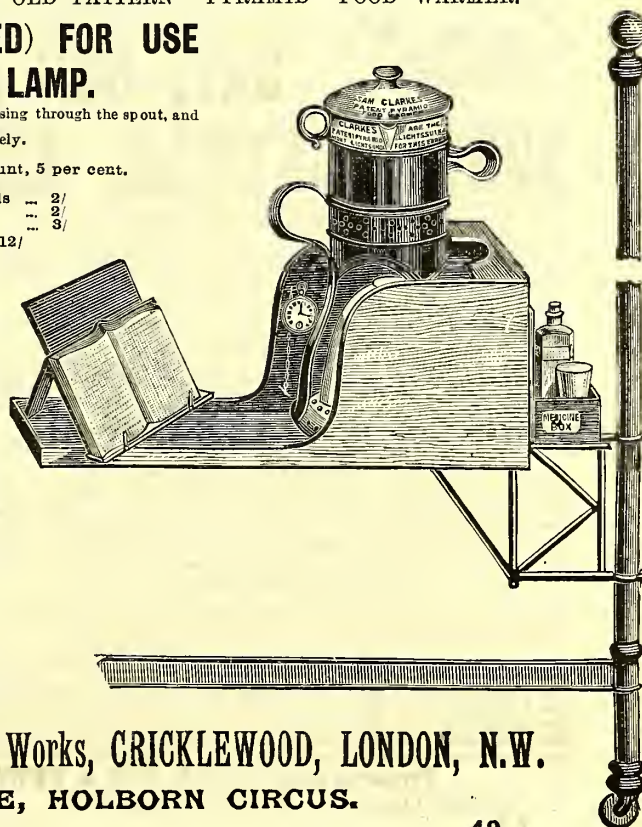
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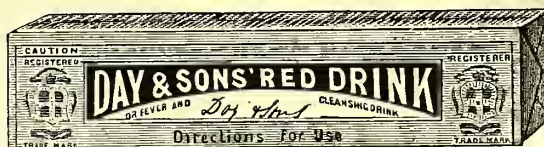
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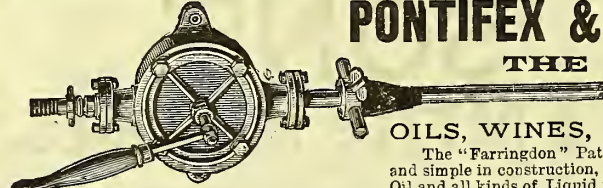
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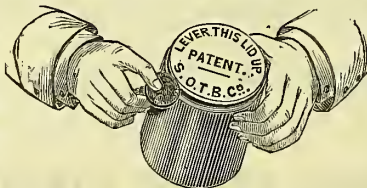
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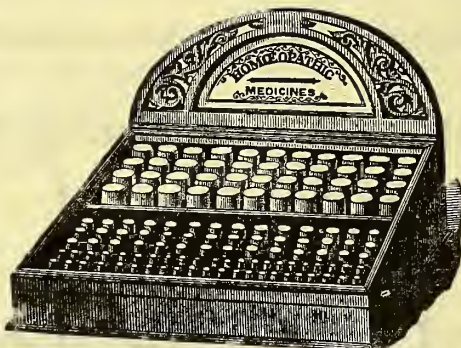
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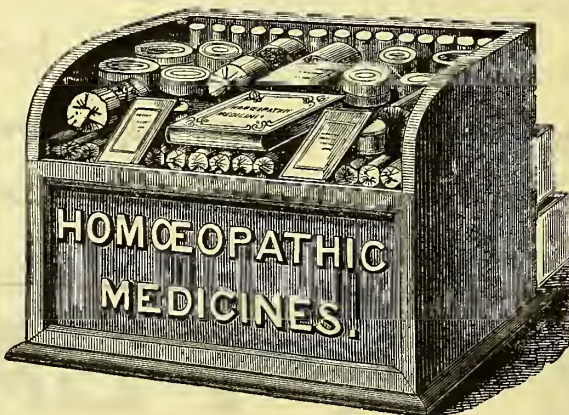
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Sizes of above—No. 1, 9 × 10 in.; No. 2, 9½ × 11 in.; No. 3, 10½ × 12 in.; No. 4, 12 × 14 in.; No. 5, 13 × 15 in.  
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|--------------------------------------------------|-------|-----|------|-----|-----|-----|
| 326 "DREADNOUGHT," felt, covering chest and back | 16/6  | 22/ | 27/  | 33/ | 44/ | 50/ |
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326A "DREADNOUGHT," chamois and flannel, per doz., No. 1, 18/; No. 2, 24/; No. 3, 30/; No. 4, 36/; No. 5, 48/6; No. 6, 55/.

326B "WAISTCOAT PATTERN," chamois and flannel, per doz., No. 1, 23/; No. 2, 31/6; No. 3, 40/; No. 4, 49/6; No. 5, 61/; No. 6, 71/.

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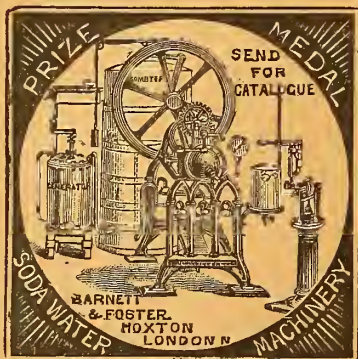
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